

HYPERION® WEB ANALYSIS STUDIO

RELEASE 11.1.2.0.00

USER'S GUIDE

ORACLE
ENTERPRISE PERFORMANCE
MANAGEMENT SYSTEM

Web Analysis Studio User's Guide, 11.1.2.0.00

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Contents

| | |
|---|----|
| Documentation Accessibility | 17 |
| Chapter 1. Getting Started | 19 |
| About Web Analysis Studio | 19 |
| Starting Web Analysis Studio | 19 |
| Web Analysis Studio Interfaces | 20 |
| Analyze Interface | 20 |
| Documents and Data Objects | 21 |
| Filter Panel | 22 |
| Page Control Panel | 22 |
| Shortcut Menus | 23 |
| Exiting Web Analysis Studio | 24 |
| Chapter 2. Working with Web Analysis Studio Desktops | 25 |
| Desktop Folders | 25 |
| Accessing Desktops | 25 |
| Accessing the Current Specified Desktop | 26 |
| Accessing Desktops not Currently Specified | 26 |
| Managing Desktop Presentations | 26 |
| Opening Presentations from the Desktop | 27 |
| Editing Presentations from the Desktop | 27 |
| Deleting Presentation Icons from the Desktop | 27 |
| Editing Presentation-File Properties from the Desktop | 28 |
| Setting Desktop Wallpaper | 28 |
| Refreshing the Desktop | 28 |
| Chapter 3. Managing Documents | 29 |
| Documents | 29 |
| Open Dialog Box | 29 |
| Opening Documents | 30 |
| Saving Documents | 31 |
| Closing Documents | 31 |
| Modifying Document Properties | 31 |

| | |
|--|----|
| Chapter 4. Managing Presentations | 33 |
| About Presentations | 33 |
| Presentation Access and Document Permissions | 33 |
| User and Group Permissions | 34 |
| Document and Folder References | 34 |
| Presentation Benefits and Considerations | 34 |
| Presentation Reference Reconciliation | 34 |
| Opening Presentations | 35 |
| Closing Presentations | 36 |
| Creating Presentations | 36 |
| Editing Presentations | 37 |
| | |
| Chapter 5. Managing Files and Folder | 39 |
| Web Analysis Repository | 39 |
| Browser Tab | 39 |
| Accessing the Browser Tab | 40 |
| Setting the View | 40 |
| Filtering the Browser Tab | 40 |
| Resizing the Browser Tab | 40 |
| Folders | 41 |
| User and Group Folders | 41 |
| Files | 42 |
| Shortcuts and Links | 42 |
| Working with Files and Folders | 42 |
| Setting File Properties | 43 |
| General Properties Tab | 43 |
| Advanced Properties Tab | 43 |
| File and Folder Shortcut Menus | 44 |
| Opening Files | 45 |
| Editing Files | 45 |
| Adding Files to Favorites | 45 |
| Adding Files to the Desktop | 46 |
| Copying Files | 46 |
| Copying and Pasting Links | 46 |
| Moving Files | 47 |
| Renaming Files | 47 |
| Deleting Files | 47 |
| | |
| Chapter 6. Creating Documents | 49 |
| About Documents | 49 |

| | |
|--|----|
| Date and Text Cell Behavior | 50 |
| Creating Documents | 51 |
| Creating Documents from Existing Documents | 54 |
| Creating Auto-Populate Dimension Documents | 55 |
| Modifying Queries | 56 |
| Modifying Filter Dimensions | 57 |
| Data Layout Options | 58 |
| Relational Dimension Header Sort | 58 |
| Label Mode | 59 |
| Selecting Dimension Members | 59 |
| Advanced Member Selection | 61 |
| Advanced Member Selection by Data Source | 62 |
| Searching for Members | 63 |
| Searching For SAP BW Characteristic Values | 64 |
| Locating Dimension Members | 65 |
| Selecting Intervals | 66 |
| Previewing Member Selections | 66 |
| Selecting Members Using Essbase Subsets | 66 |
| Defining Member Subset Selections | 67 |
| Wildcard Characters | 68 |
| Expressions | 68 |
| UDAs | 68 |
| Selecting Financial Management User Defined Fields | 68 |
| Filtering by SAP BW Member Properties | 69 |
| SAP BW Select Top/Bottom | 70 |
| Selecting SAP BW Period to Date | 71 |
| Providing SAP BW Variables | 72 |
| Selecting Financial Management Member Lists | 72 |
| Selecting Substitution Variables | 72 |
| Multiple Substitution Variables | 73 |
| Tips on Syntax | 73 |
| Analysis Tools and Substitution Variables | 73 |
| Creating and Selecting Personal Variables | 73 |
| Creating and Applying Points of View | 74 |
| User POV | 76 |
| Defining Dynamic Time Series Selections | 76 |
| Defining Previous Member Selections | 77 |
| Selecting Attributes | 77 |
| Turning Off Key Figure Attributes | 78 |

| | |
|--|-----|
| Creating Calculated and Restricted Key Figures | 78 |
| Chapter 7. Navigating Documents | 81 |
| Navigating Data Objects and Data Sources | 81 |
| Navigation Methods | 82 |
| Swapping and Moving Dimensions | 83 |
| Paging | 83 |
| Keep Only | 84 |
| Remove Only | 84 |
| Drilling | 84 |
| Drill Linking | 86 |
| Defining Drill Links | 87 |
| Dragging | 88 |
| Undo and Redo | 89 |
| Chapter 8. Formatting Documents | 91 |
| Formatting Options | 91 |
| Other Kinds of Formatting | 92 |
| Formatting Order of Precedence | 92 |
| Data Display Options | 93 |
| Setting the Label Mode | 94 |
| Sorting Dimension Headers | 95 |
| Relational Dimension Header Sort | 96 |
| Formatting Dialog Box | 96 |
| Creating Formatting Definitions | 98 |
| Formatting Data | 98 |
| Cell Formatting | 99 |
| Sizing Columns | 100 |
| Sizing Individual Columns | 100 |
| Sizing All Columns to a Common Width | 100 |
| Autosizing Column Width | 100 |
| Changing and Locking Display Types | 101 |
| Spreadsheet Options | 101 |
| Charts and Chart Types | 102 |
| Pie Charts | 103 |
| Quadrant Charts | 103 |
| Bubble Charts | 103 |
| Chart Properties | 103 |
| General Chart Properties | 104 |
| Titles Chart Properties | 105 |

| | |
|---|------------|
| Axes Chart Properties | 105 |
| Series Effects Chart Properties | 106 |
| Series Chart Properties | 107 |
| Filling Chart Objects | 107 |
| Line Widths of Zero (0) | 108 |
| Pie Chart Properties | 108 |
| Bubble Chart Properties | 108 |
| Chart Preview | 109 |
| Selecting Color | 110 |
| Font Properties | 110 |
| Selecting Graphics | 111 |
| Chapter 9. Managing Analysis Tools | 113 |
| Analysis Tools | 113 |
| Related Content | 114 |
| Ordering Analysis Tools | 114 |
| Default Analysis Tools | 114 |
| Activating and Deactivating Analysis Tools | 115 |
| Editing Definitions | 115 |
| Show/Hide Only | 115 |
| Asymmetrical Analysis | 115 |
| Multiple Show/Hide Only Definitions | 116 |
| Differences in Show/Hide Only Definitions | 116 |
| Creating Show/Hide Only Definitions | 117 |
| Traffic Lighting | 118 |
| Financial Intelligence Variations | 119 |
| Assign Limits Shortcut Menu | 119 |
| Creating Traffic Lighting Definitions | 120 |
| Setting Traffic Lighting Opacity | 120 |
| Sorting | 121 |
| Sorting Dialog Box | 121 |
| Creating Sorting Definitions | 121 |
| Restricting Data | 122 |
| Restrict Data Controls | 122 |
| Creating Restrict Data Definitions | 122 |
| Retrieve Only Top/Bottom | 124 |
| Behavior of multiple row dimension member selection | 124 |
| Analysis Tools and Multiple Filter Axis Dimension Members | 124 |
| Creating Retrieve Only Top/Bottom Definitions | 125 |

| | |
|--|------------|
| Data Formatting | 125 |
| Calculations | 126 |
| Absolute Value | 127 |
| Average | 127 |
| Cumulative | 127 |
| Difference from Average | 127 |
| Divide | 128 |
| Linear Regression | 128 |
| Maximum | 128 |
| Maximum Value | 128 |
| Minimum | 129 |
| Minimum Value | 129 |
| Multiply | 129 |
| Percent | 129 |
| Percent Difference from Average | 130 |
| Percent of Difference | 130 |
| Percent of Member | 130 |
| Percent of Total | 130 |
| Rank Ascending | 131 |
| Rank Descending | 131 |
| Subtract | 131 |
| Sum | 131 |
| Square Root | 131 |
| Trend | 132 |
| Variance | 132 |
| Variance Percent | 132 |
| Complex Calculations | 132 |
| Creating Calculations | 133 |
| Modifying Calculations | 137 |
| Essbase Attribute Calculations | 137 |
| Creating SAP BW Currency Conversion Definitions | 138 |
| Creating SAP BW Unit of Measure Conversion Definitions | 138 |
| Chapter 10. Exporting Documents and Presentations | 141 |
| Smart View | 141 |
| Exporting Data Options | 142 |
| Exporting All Report Objects to Microsoft Office | 144 |
| Exporting a Screen to Microsoft Word or PowerPoint | 144 |
| Exporting to the Clipboard | 144 |

| | |
|--|------------|
| Export Data Unformatted | 144 |
| Export Options | 145 |
| Exporting the Current Document | 145 |
| Exporting Documents and Presentations | 145 |
| Saving As HTML | 146 |
| E-mailing Document Links | 147 |
| Chapter 11. Printing | 149 |
| Printing Options | 149 |
| Print Dialog Page Tab | 150 |
| Print Dialog Header/Footer Tab | 150 |
| Dynamic Text Labels | 151 |
| Creating Dynamic Text Labels | 152 |
| Printing | 154 |
| Printing all Open Reports | 154 |
| Print Preview | 155 |
| Chapter 12. Managing Database Connections | 157 |
| Database Connections | 157 |
| Database Connections | 158 |
| Database Connection Access and Document Permissions | 158 |
| User and Group Permissions | 158 |
| Creating OLAP and Oracle Hyperion Database Connections | 158 |
| Database Connection Properties | 161 |
| Measures Formatting | 162 |
| Integrating OLAP and Relational Data | 162 |
| Defining Relational Drill-through | 163 |
| Controlling Query Result Set Size | 163 |
| Creating Relational Drill-Through | 163 |
| Essbase Database Connections | 165 |
| Restrict Data | 166 |
| Retrieve Only Top/Bottom | 166 |
| Edit Data | 166 |
| Suppress Missing Rows, Zeros, and Shared Members | 166 |
| Label Mode and Alias Tables | 166 |
| Essbase Drill Settings | 167 |
| LROs | 167 |
| Relational Drill-through | 167 |
| Integration Services Drill-through | 167 |
| Essbase Advanced Member Selection | 167 |

| | |
|--|-----|
| Attribute Dimensions and Attribute Calculations | 168 |
| Essbase Metadata Security and Web Analysis Document Design | 168 |
| Financial Management | 168 |
| Financial Management Related Content | 168 |
| Cell Text | 169 |
| Line Item Detail | 169 |
| Recalculating Financial Management | 169 |
| Org By Period | 169 |
| Financial Management Advanced Member Selection | 169 |
| User Defined Fields | 170 |
| Display Entity Currency | 170 |
| Financial Management Conventions | 170 |
| SAP BW | 171 |
| SAP BW Pre-requisites | 171 |
| SAP BW Conventions | 172 |
| SAP BW Advanced Member Selection | 172 |
| SAP BW Features Available in Web Analysis Studio | 173 |
| Creating SAP BW Database Connections | 173 |
| SQL Server Analysis Services | 174 |
| SSAS Prerequisites | 174 |
| SSAS Advanced Member Selections | 174 |
| SSAS Features Available in Web Analysis Studio | 175 |
| SQL Server Analysis Services Connectivity | 175 |
| Relational Access | 176 |
| SQL Spreadsheet | 176 |
| Freeform Grid | 176 |
| Relational Drill-through | 176 |
| Relational Database Connection | 176 |
| Integration Services Drill-through | 177 |
| Controlling Query Result Set Size | 177 |
| Relational Database Connections | 177 |
| Connection Page | 177 |
| Select Fact Table Page | 179 |
| Relational Cube Editor | 179 |
| Creating Relational Database Connections | 180 |
| Editing Database Connections | 184 |
| Changing Database Connections for Report Objects | 184 |

| | |
|---|-----|
| Chapter 13. Creating Pinboards | 185 |
| Pinboards | 185 |
| Pinboards Prerequisites | 186 |
| Creating a Pinboard Series | 186 |
| Creating Pins | 186 |
| Traffic Lighting Control Panel | 186 |
| Select Traffic Lighting Dimension Dialog Box | 186 |
| Pinboard Designer | 186 |
| Creating a Pinboard | 187 |
| Modifying Pinboards | 188 |
| Creating a Pinboard Series | 188 |
| Creating Pins | 188 |
| Selecting Pins | 189 |
| Creating Pins | 189 |
| Editing Pins | 190 |
| Deleting Pins | 190 |
| Creating Image Pins | 190 |
| Creating Color Pins | 191 |
| | |
| Chapter 14. Creating SQL Spreadsheets | 193 |
| SQL Spreadsheets | 193 |
| Creating SQL Spreadsheets | 194 |
| Creating SQL Spreadsheets with SQL Query Builder Wizard | 195 |
| Enter SQL Query Dialog Box | 197 |
| SQL Query Builder Wizard | 198 |
| Select Column Advanced Dialog Box | 200 |
| Dynamic Text Labels | 200 |
| Dynamic Text Labels for SQL Spreadsheets | 201 |
| Creating a SQL Subscription Control | 201 |
| | |
| Chapter 15. Creating Freeform Grids | 203 |
| Freeform Grids | 203 |
| Creating Freeform Grids | 204 |
| Formatting Freeform Grids | 206 |
| Creating Formulas for Freeform Grids | 207 |
| Controlling Freeform Grid Content with Data Objects | 209 |
| | |
| Chapter 16. Creating Custom Documents | 211 |
| Comparing Web Analysis Studio and EPM Workspace | 211 |
| Differences between the Two Clients | 211 |

| | |
|---|-----|
| Font List Differences Between Web Analysis Studio and EPM Workspace | 212 |
| Document Designer | 213 |
| Accessing Document Designer | 213 |
| Setting Document Designer Options | 213 |
| Design for HTML | 214 |
| Accessing the Palette Tab | 215 |
| Custom Document Components | 215 |
| Containers | 215 |
| Content Panels | 215 |
| Four Data Objects | 215 |
| Subscription Controls | 216 |
| SQL Spreadsheet and SQL Subscription | 216 |
| Creating Container Panels | 216 |
| Adding Custom Document Components | 217 |
| Undo and Redo | 217 |
| Selecting Components | 217 |
| Selecting Multiple Components | 217 |
| Sizing Components | 217 |
| Moving Components | 218 |
| Cutting, Copying, Pasting, and Deleting Components | 218 |
| Formatting Components | 218 |
| Default Object Properties | 220 |
| Setting the Background | 220 |
| Aligning Components | 221 |
| Creating Hotspots | 223 |
| Creating Split Panels | 223 |
| Nesting Split Panels | 224 |
| Retrieving Focus From Slack Space Split Panels | 224 |
| Linking Components by Query | 224 |
| Common Data Sources | 224 |
| Unlinking Components | 225 |
| Linking Selected Dimensions | 225 |
| Creating Subscription Controls | 226 |
| Subscription Control Dialog Sequence | 226 |
| Creating Subscription Controls | 226 |
| Ordering Dimension Member Controls | 227 |
| Indenting Dimension Member Controls | 227 |
| Saving Subscription Control Selections to User POVs | 228 |
| Enabling a Subscription Control to “Activate from Service Button” | 228 |

| | |
|--|-----|
| Changing Data Sources | 228 |
| Creating Dynamic Dimension Member Controls | 228 |
| Creating Dependent Subscription Controls | 229 |
| Creating Selection Buttons | 229 |
| Ordering Dimension Member Controls | 230 |
| Creating Extended Mode Controls | 230 |
| Renaming Dimension Member Buttons | 231 |
| Creating Dynamic Text Labels | 231 |
| Dynamic Text Labels | 231 |
| Fixed References | 232 |
| Time Format Syntax | 232 |
| Examples | 233 |
| Custom Document Components | 234 |
| Panel Object | 234 |
| Using Panels for Object Placement | 234 |
| Split Panel Object | 235 |
| Label Object | 235 |
| Text Area Object | 235 |
| Image Objects | 236 |
| HTML Browser Object | 236 |
| Combo Box Subscription | 236 |
| Radio Button Group Subscription | 236 |
| Check Box Group Subscription | 237 |
| Tab Group Subscription | 237 |
| Slider Subscription | 237 |
| Selection Button Subscription | 238 |
| Multi-level Combo Box Subscription | 238 |
| Alias Controller Object | 238 |
| Services Button Object | 239 |
| SQL Spreadsheet Objects | 241 |
| SQL Subscription Objects | 241 |
| Minimizing Document Load Times | 241 |

| | |
|---|------------|
| Chapter 17. Editing Data Values | 243 |
| Initiating Data Mode and Editing Data | 243 |
| Copying, Cutting, and Pasting To and From Microsoft Excel | 244 |
| Tips for Edit Data Mode | 244 |
| Integration Services Drill-Through | 244 |
| Accessing Related Content | 245 |

| | |
|--|------------|
| Related Content Definitions | 245 |
| Related Content Dialog Box | 246 |
| Chapter 18. Accessing External Media | 247 |
| Importing Documents and Presentations | 247 |
| Integration Services Drill-Through | 249 |
| Accessing Related Content | 249 |
| Related Content Definitions | 250 |
| Related Content Dialog Box | 250 |
| Creating Related Content Definitions | 251 |
| Specifying Related Content Dimension Members | 251 |
| Defining Related Content | 252 |
| LROs | 253 |
| Creating LROs | 253 |
| Accessing LROs | 253 |
| Chapter 19. Setting Preferences | 255 |
| Working with Preference Files | 255 |
| Setting Active Preferences | 256 |
| Preferences and Formatting Options | 256 |
| Creating Preference Files | 257 |
| Editing Shared Preference Files | 257 |
| Managing Shared Preference Files | 257 |
| Finding Preferences | 257 |
| General Preferences | 258 |
| Home Page Preferences | 258 |
| Startup Preferences | 259 |
| Folders Preferences | 259 |
| Look and Feel Preferences | 260 |
| Drilling Preferences | 261 |
| Default Formatting Preferences | 261 |
| OLAP Server Preferences | 262 |
| Database Preferences | 263 |
| Alias Tables | 263 |
| Setting Alias Tables and Default Logon Method | 264 |
| POV Definitions | 265 |
| Generic and Specific Documents | 265 |
| Replacing Member Selection Statements | 266 |
| Default Dimension Layout and Member Selections for New Documents | 266 |
| Session-based Points of View | 266 |

| | |
|--|-----|
| Reloading Documents | 266 |
| POV Definitions and Personal Variables | 266 |
| Personal Variables | 266 |
| Generic and Specific Documents | 266 |
| POV Definitions and Personal Variables | 267 |
| Chapter 20. Web Analysis Administration | 269 |
| Defining the Behavior of Drill Link Reports When the Target Report is Closed | 269 |
| Web Analysis Utilities | 269 |
| Repository Password Encryption Utility | 269 |
| Web Analysis Configuration Test Servlet | 270 |
| Improving Web Analysis Studio Responsiveness | 272 |
| Improving Web Analysis Studio Performance | 272 |
| Importing ARU Files to Set User and Active Preferences | 272 |
| Processing Order | 273 |
| Importing ARU Files | 273 |
| ARU Import File Format Supported Tags | 274 |
| Creating Personal Variables | 274 |
| Removing Personal Variables | 275 |
| Creating POV Definitions | 275 |
| Removing POV Definitions | 276 |
| Adding Personal Database Connections | 276 |
| Setting User Preferences | 277 |
| Setting Active Preferences | 278 |
| Rename Utility | 279 |
| Rename Utility Important Considerations | 279 |
| Rename Utility Files | 280 |
| Rename Utility Installation | 281 |
| Rename Utility Map File | 281 |
| Using the Rename Utility | 284 |
| Renamer.properties | 285 |
| Glossary | 287 |
| Index | 311 |

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1

Getting Started

In This Chapter

| | |
|--------------------------------------|----|
| About Web Analysis Studio | 19 |
| Starting Web Analysis Studio | 19 |
| Web Analysis Studio Interfaces | 20 |
| Analyze Interface | 20 |
| Documents and Data Objects | 21 |
| Exiting Web Analysis Studio | 24 |

About Web Analysis Studio

Oracle's Hyperion® Web Analysis Studio is an online analysis, presentation, and reporting interface for multidimensional and relational data.

Starting Web Analysis Studio

The Sun Java plug-in is installed when Web Analysis Studio is first used.

► To start Web Analysis Studio:

- 1 In your Web browser's Address bar, enter the Web Analysis Studio URL(`http://hostname:port/WebAnalysis/WebAnalysis.jsp`) and press **Enter**.

hostname:port is the name of the computer on which Web Analysis Studio is installed with the IP address and port number of the Web Analysis Studio server. The server name (`WebAnalysis_Server`) is case sensitive.

The Logon page is displayed.

- 2 Enter a user name and password.
- 3 Click **Logon**.

The document or interface specified by Startup preferences is displayed. See “[Startup Preferences](#)” on page 259.

Web Analysis Studio Interfaces


- **Analyze** — For analyzing, presentations, and reporting; features navigation methods used for investigating information (see [Chapter 7, “Navigating Documents”](#)).
- **Desktop**—For accessing presentation document playlists; contains icons that function like Windows desktop shortcuts (see [Chapter 2, “Working with Web Analysis Studio Desktops”](#)).
- **Document Designer**—For creating custom documents; provides access to its components through a toolbar displayed below the menu bar (see [Chapter 16, “Creating Custom Documents”](#)).
- **Edit Data**—For changing data values and sending changes back to Oracle Essbase; is accessed from the data object shortcut menu (see [“Initiating Data Mode and Editing Data” on page 243](#)).








Analyze Interface




Analyze interface components:

- **Title bar**—Features minimize, maximize, and close buttons, and a shortcut menu.
- **Masthead**—Identifies the Oracle | Hyperion product, and enables companies to customize and co-brand the client.
- **Menu bar**—Provides access to commands and subcommands.
- **Toolbar**—Provides single-click access to tasks and modules.

To show or hide the toolbar, select **View**, then **Toolbar**.

| Toolbar Button | Description |
|---|------------------|
|  | Toggle View Pane |
|  | New |
|  | Open |
|  | Save |
|  | Save As |
|  | Print |
|  | Undo |
|  | Redo |

| Toolbar Button | Description |
|---|-------------------|
|  | Home Page |
|  | Previous Document |
|  | Next Document |
|  | Data Layout |
|  | Desktop |
|  | Analyze |
|  | Design |

- **Process bar**—Below the toolbar and above the content area. When you begin a complex task with multiple steps, the process bar indicates the number of steps, and the current step. The content area changes with each step, until the process is completed. When not in a process, it indicates the full path to the current document's repository location. The process bar also indicates the current module or interface.
- **View pane**—Extends down the left side of the interface. Buttons atop the View pane switch View pane tabs:
 -  **Browser** —Presents the repository as a node tree. Only files and folders to which you are granted access are listed. This typically consists of your own folder and group folders to which you belong. When navigation panel items are selected, their contents are listed in the selection panel below.
 -  **Information Panel** — Composed of segments summarizing the content area. Each segment features controls and context-sensitive shortcut menus.
 -  **Palette**—Lists the document components in the current document, and their component properties.

To show or hide the View pane, select **View** , then **View Pane**.

- **Content area** — Indicates the current module, View pane panel, and document and, when multiple documents are open, displays a tab bar that identifies the open document.
- **Status bar** — Provides applet processing information.

Documents and Data Objects

Documents display data values returned from the data source in a data object. Multiple data objects of multiple display types can occupy one document.

- Spreadsheet
- Chart
- Pinboard
- SQL spreadsheet
- Free-form grid

You can convert spreadsheets to charts or pinboards. SQL Spreadsheets and free-form grids must be created using the Document Designer. Prerequisites exist for all display types.

Topics related to documents and data objects:

- [“Filter Panel” on page 22](#)
- [“Page Control Panel” on page 22](#)
- [“Shortcut Menus” on page 23](#)

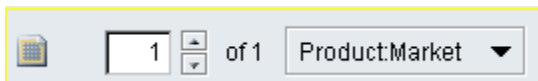
Filter Panel

The Filter panel displays member selections on the filter axis. If no members are selected, dimensions are represented by their first generation members. Filter selections focus the intersections, the data values, and, consequently, the data object analysis.

► To show or hide the Filter panel, select View, then Filters.

Page Control Panel

The Page Control panel indicates members assigned to the Page axis of the spreadsheet. Spreadsheet row and column intersections are organized by Page-axis dimensions.



► To navigate Page dimensions, perform one or both actions:

- Click the Page Control scroll buttons.
- From the drop-down list, select a member name.

Note: Multiple-page, unlike single-page lists, which display only page combinations that contain data, multiple-page lists display all possible page combinations. Oracle | Hyperion recommends that, for sparse dimensions, single-page lists be used.

- To separate page dimensions into multiple lists, click the Page Control panel page icon.
- To combine multiple-page dimensions into one drop-down list, click the Page icon.

Shortcut Menus

Data object shortcut menus are context sensitive to headers, cells, dimensions, and data values. It provides immediate access to advanced formatting and function options:

| Command | Description | Submenu |
|-----------------|---|---|
| Browse | Displays the Dimension Browser dialog box, used for member selection | |
| Keep Only | Retains only the selected member | |
| Remove Only | Removes only the selected member. | |
| Drill | Increases or decreases the level of dimension detail | <ul style="list-style-type: none"> ● Drill ● Down ● Up ● To Top ● Options |
| Analysis Tools | Applies sorting, ranking, filtering, calculation, and conversion definitions to the current selection | <ul style="list-style-type: none"> ● Analysis Tools Manager ● Traffic Lighting ● Sort ● Retrieve Only Top/Bottom ● Restrict Data ● Calculation ● Show/Hide Only ● Format ● Currency Conversion (On SAP BW data sources) ● Unit of Measure Conversion (On SAP BW data sources) |
| Related Content | Accesses data from other Oracle Hyperion sources | |
| Search | Searches for a member in the selected dimension | |
| Data display | Sets custom data display behavior | <ul style="list-style-type: none"> ● Selected Member ● Selected Member First ● Default Label Mode ● Product-specific Label Mode ● Dimension Header Sort (Default, Ascending, Descending, Level, Generation) ● Show Linked Reporting Object Indicators ● Suppress (Missing Rows, Shared Members, Zero Rows) |

| Command | Description | Submenu |
|---------------------|--|--|
| Refresh data | Refreshes the data from the data source | |
| Export Data | Exports data values | <p>You can export to Microsoft Office, to a tab-delimited text file, or to the operating system clipboard in these formats:</p> <ul style="list-style-type: none"> ● Query-ready ● Formatted ● Image ● Export Entire Report ● Unformatted |
| Print | Displays the Print dialog box, used to print the current page of the data object | |
| Formatting | Displays the Formatting dialog box, used to set header and cell formatting options | |
| Edit data | Edits cell values and writes them back to Essbase | |
| Spreadsheet Options | Displays the Spreadsheet Options dialog box used to select options. For charts, opens Chart Properties | |
| Column Sizing | Sets the column width | <ul style="list-style-type: none"> ● Autosize ● Custom width ● Set all columns to this width |

Exiting Web Analysis Studio

- To exit Web Analysis Studio, select **File**, then **Exit**.

2

Working with Web Analysis Studio Desktops

In This Chapter

| | |
|---|----|
| Desktop Folders | 25 |
| Accessing Desktops | 25 |
| Managing Desktop Presentations | 26 |
| Opening Presentations from the Desktop | 27 |
| Editing Presentations from the Desktop | 27 |
| Deleting Presentation Icons from the Desktop | 27 |
| Editing Presentation-File Properties from the Desktop | 28 |
| Setting Desktop Wallpaper | 28 |
| Refreshing the Desktop | 28 |

Desktop Folders

Presentations, playlists of documents, enable documents to be grouped, organized, ordered, distributed, and reviewed. Presentation icons are displayed on the desktop—like application shortcuts are displayed on the Windows desktop.

Accessing Desktops

You can create multiple desktop folders. However, desktop interface can display only the desktop folder that is currently specified by the active preference file. See [“Folders Preferences”](#) on page 259.

Topics that discuss how to access desktops:

- [“Accessing the Current Specified Desktop”](#) on page 26
- [“Accessing Desktops not Currently Specified”](#) on page 26

Accessing the Current Specified Desktop

- ▶ To access the currently specified desktop, select **Go**, then **Desktop**.

Accessing Desktops not Currently Specified

- ▶ To access desktops that are not currently specified:

- 1 Select File then, Preferences.**

The User Preferences dialog box is displayed.

- 2 In Active Preferences, select one option:**

- Use **My Preferences**—To specify the folder identified in the preferences file of your user folder.
- Use **Shared Preferences**—To specify a folder identified in the preferences file of a particular repository location.

- 3 Click Folders.**

Desktop Folder specifies the location of the folder that you specified in the previous step.

- 4 Optional: To specify a different repository location for the desktop folder.**

- Click the Desktop Folder Browse button (...).
- In **Open**, navigate to a repository location.
- If there is no desktop folder at the location, click **New Folder**, and in **File name**, enter a name.
- Click **OK**.

The repository location and folder name are displayed in **Desktop Folder**.

- 5 Click OK.**

- 6 Click Switch to Desktop.**

The selected desktop is displayed.

Managing Desktop Presentations

Only presentations, and links or shortcuts to presentations, display on the desktop. Other files and folders in the desktop folder do not display as icons.

You must be granted access, then locate a presentation, link, or shortcut in the desktop folder for a presentation icon to be displayed.

You cannot hide a presentation from the desktop. If you do not want to display a presentation on the desktop, place it outside the desktop folder.

Guidelines for managing presentations:

- Oracle | Hyperion discourages copying presentations to multiple individual desktops. It is difficult to track and synchronously maintain multiple copies in large repositories.
- Oracle | Hyperion recommends distributing shortcuts or links, rather than the original presentation. Maintaining only one presentation protects the repository from duplicate information and enables presentations to be centrally maintained and updated.

Recommended methods for managing presentations:

1. Create and maintain a presentation in your user desktop folder.
2. Create groups for each required distribution pattern.
3. Edit Security file properties to grant access to groups. This is done through Workspace.
4. Reference the original presentation by creating links or shortcuts in the group desktop.

Opening Presentations from the Desktop

- To open presentations from the desktop, double-click a presentation icon.

You may be prompted with the Database Logon dialog box (if the selected presentation uses database connections that you do not own). To log on to the database connection, enter the database connection user name and password, and click OK.

All documents of the presentation playlist are loaded in the Analyze interface. Document names are listed in the tab bar. The first document is opened and its tab is highlighted.

Note: When you open a presentation from the desktop, all open documents close.

Editing Presentations from the Desktop

- To edit presentations from the desktop, right-click a presentation icon, and select **Edit**.

The Presentation Wizard is displayed, enabling you to edit the presentation icon, contents, and order. See [“Editing Presentations” on page 37](#).

Deleting Presentation Icons from the Desktop

Deleted presentations are removed from your repository desktop folder, but the documents referenced by deleted presentations are not deleted. Deleting a shortcut or link does not remove the associated presentation from your desktop folders.

- To delete presentations from the desktop, right-click a presentation icon, and select **Delete**.

See [“File and Folder Shortcut Menus”](#) on page 44.

Editing Presentation-File Properties from the Desktop

Presentation-file properties enable you to rename presentations and enter file descriptions.

- To edit presentation file properties, right-click a presentation icon, and select **Properties**.

The File Properties dialog box is displayed. The General tab enables you to rename the presentation and enter a description. The Advanced tab enables you to set document properties. See [“Setting File Properties”](#) on page 43.

Setting Desktop Wallpaper

You can load an image as desktop wallpaper, and specify how the image covers the desktop.

- To set desktop wallpaper:

- 1 **Right-click the desktop (not an icon), and select **Wallpaper**.**

The Select Graphic dialog box is displayed.

- 2 **Click **Load** to browse for a graphic file, then click **Open** to select the preferred file.**

- 3 **In **Style**, select an option:**

- **Center**—Centers the graphic on the desktop
- **Stretch**—Stretches the graphic across the desktop
- **Tile**—Repeats the graphic across the desktop
- **Top-Left**—Displays the graphic in the top left corner of the desktop

You can set the desktop wallpaper for the current desktop using the preferences Look and Feel tab.

Refreshing the Desktop

- To refresh the desktop, right-click the desktop, and select **Refresh**.

3

Managing Documents

In This Chapter

| | |
|-------------------------------------|----|
| Documents | 29 |
| Open Dialog Box | 29 |
| Opening Documents | 30 |
| Saving Documents | 31 |
| Closing Documents | 31 |
| Modifying Document Properties | 31 |

Documents

Documents format and display data values. When documents are saved, they become multipurpose files for presentation, analysis, and distribution in numerous formats.

Document tasks:

- “Opening Documents” on page 30
- “Saving Documents” on page 31
- “Closing Documents” on page 31
- “Modifying Document Properties” on page 31

Additional document procedures:

- **Renaming documents**—See “File and Folder Shortcut Menus” on page 44.
- **Distributing documents**—See “Exporting Documents and Presentations” on page 141, “Printing” on page 149, and “Setting File Properties” on page 43.

Open Dialog Box

The Open dialog box provides an interface for retrieving repository files.

- To access the Open dialog box, select **File**, then **Open**.

| Control | Description |
|----------|---|
| Location | Indicates the current repository folder and provides a list of previously visited folders (stored as a series). |

| Control | Description |
|-----------------|---|
| Back | Moves to the previous folder. |
| Forward | Moves to the next folder in the series. |
| Up | Moves up one folder level in the repository. |
| Favorites | Moves to the current Favorites folder. |
| Favorites List | Lists links to all available Favorites folders. |
| Home | Moves to the current Home folder. |
| New Folder | Creates a folder at the current location. |
| View | Changes between Detail, List and Icon views. |
| Favorites frame | Displays shortcuts to the contents of Favorites folders. |
| Selection frame | Lists the current folder's contents, and provides a menu that includes Copy, Cut, Rename, Delete, View, and Properties. |
| File Name | Indicates the name of the current folder. |
| Files of Type | Indicates the file-type filter (used to display the contents of the folder in the selection frame). |

Opening Documents

► To open documents:

1 Select File , then Open .

The Open dialog box is displayed.

2 From Files of Type, select Web Analysis Document.

3 Navigate to a document.

4 Optional: To sort large lists of documents and presentations:

a. Right-click the selection frame, and select **View**, then **Detail**.

The selection frame features three columns: **Name**, **File Type**, and **Last Modified**.

b. Click a column header once, to sort the contents of the selection frame in ascending order, or twice, to sort the contents of the selection frame in descending order.

5 Perform an action:

- To select a document from the selection frame, click the document name or icon.
- To select multiple documents in a series, from the selection frame, click a document name and press and hold **Shift** while selecting another document name. The first selection, the last selection, and all documents between the first and last selection are selected.

- To select multiple documents, not necessarily in a series, press and hold the **Ctrl** key while clicking document names in the selection panel.
- To deselect items, click outside the Name column or on empty white space.
- To select an item and dismiss the **Open** dialog box, double-click the item.

6 Click **OK**.

7 If prompted, in **Database Login**, enter a user name and password for the database connection, click **Save User ID and Password**, and click **OK**.

The selected document is displayed in the content area.

Saving Documents

Saving stores information, such as the query, the document properties, and the formatting. Saving does not send data value updates to the data source. See [“Editing Data Values” on page 243](#). You can save documents only into folders that you can access.

Note: You can create hotspots that save the current document. See [“Creating Hotspots” on page 223](#).

➤ To save documents:

1 Select an option:

- To save previously saved documents, select **File**, then **Save**.
- To save new documents, select **File**, then **Save As**.

2 In the **Save As** dialog box, define the properties of the saved document and click **OK**.

Closing Documents

➤ To close the active document, select **File**, then **Close**.

➤ To close all open documents, select **File**, then **Close All**.

Modifying Document Properties

Document properties impact display and use. You set document properties in the **Advanced** tab of the **File Properties** dialog box.

➤ To modify document properties:

1 Right-click the **Content** tab for a document, and select **Properties**.

2 Select the **Advanced** tab.

The Advanced tab shows the document properties for the current document.

- 3 **Optional:** To set a JSP template to be used when the document is converted to HTML, for the HTML Web client, in **HTML Client Override Template**, enter the JSP file name and path.
- 4 **Optional:** To set a JSP template to be used when the document is saved as HTML, in **HTML Export Override Template**, enter the JSP file name and path.

Web Analysis Studio converts documents to HTML Web pages. All templates must be in the Web Publishing template directory of the application server (`wp_templates`), and all templates must be specified by name (including the JSP suffix).

If no JSP template is specified, Web Analysis Studio uses the `report_publish.jsp` template in the `\webapps\Analyzer7_Server\templates` directory. See [“Saving As HTML” on page 146](#).

- 5 **Optional:** To set a JSP template to be used when this document is exported as HTML by the batch utility, in **HTML Batch Export Template**, enter the JSP file name and path.
- 6 **Optional:** To prevent use of particular methods, select one or more **Document Usage** options.

You can prevent drilling up, drilling down, accessing shortcut menu, and changing display type.

- 7 Click **OK**.

4

Managing Presentations

In This Chapter

| | |
|--------------------------------------|----|
| About Presentations | 33 |
| Document and Folder References | 34 |
| Opening Presentations | 35 |
| Closing Presentations..... | 36 |
| Creating Presentations | 36 |
| Editing Presentations | 37 |

About Presentations

Presentations are lists of references to documents in the repository.

Topics that discuss presentation permissions:

- [“Presentation Access and Document Permissions” on page 33](#)
- [“User and Group Permissions” on page 34](#)

Related Topics

[“File and Folder Shortcut Menus” on page 44.](#)

[“Exporting Documents and Presentations” on page 141](#)

[“Printing” on page 149](#)

[“Setting File Properties” on page 43.](#)

Presentation Access and Document Permissions

Because document access is independent of presentation access, it is possible to distribute presentation that contain documents that users cannot access.

Documents in presentations are listed to all users with list permissions (to the presentations) but can be opened only by users with read permissions.

Document permissions that withhold access prevent all access to the document, directly or through a presentation. Presentation permissions that withhold access do not prevent access to a document.

User and Group Permissions

Users can access presentations assigned directly to them or assigned to a group to which they belong.

When presentations are assigned to groups, the documents in the presentations must also be assigned to the groups. Otherwise, group members can access the presentation but cannot access its documents (unless they have individual user access).

To mitigate the risk of conflicting permissions, store presentations with the documents that they reference. Whenever possible, distribute documents and presentations to groups. It is easier to set permissions for all files in a folder and all users in a group than it is to manage permissions for individual files and users.

Document and Folder References

You can add two kinds of references to presentations:

- **Document**—When you add a document directly to a presentation, a reference to a unique document identifier is created in the presentation. The presentation can present the document from wherever it is located.
- **Folders**—When you add a folder to a presentation, the folder reference is added directly to the **Presentation Content**, but documents in the folder are dynamically referenced. Documents added or removed from the folder are automatically added to or removed from presentations that reference the folder.

Note: You cannot dynamically reference descendant folders or presentations.

Presentation Benefits and Considerations

Web Analysis Studio synchronizes presentation playlists with folder content. Therefore, you can modify folder content without editing the presentation that references the folder. You must limit write access to the folder to prevent other users from adding content to the folder, and thus, to the presentation.

For document references, presentation content is fixed.

Presentation Reference Reconciliation

When presentations are opened, Web Analysis Studio attempts to reconcile document references and then folder references.

If a file is copied and the original file is deleted, Web Analysis Studio cannot locate the unique file identifier. In this case, Web Analysis Studio searches for files of the correct name at the same location. If a reference cannot be found, the Presentation Wizard displays the reference in red.

Opening Presentations

► To open presentations:

1 From the menu bar, Select File, then Open.

The Open dialog box is displayed and lists the current folder contents, specified by location.

2 From Files of Type, select Web Analysis Presentation .

3 Navigate to a presentation.

As you navigate, the selection frame lists the files and folders indicated by Files of Type.

4 Optional: Sort large lists of documents and presentations using these options:

a. Right-click the selection frame and select View, then Detail.

The selection frame features three columns Name, File Type, and Last Modified.

b. Click a column header to sort the selection frame contents in ascending order, by that column.

c. Click the column header again to sort the selection frame contents in descending order, by that column.

5 Select a presentation (or additional documents and presentations) using these options:

- To select a presentation from the selection frame, click the presentation name or icon.

- To select a series of document or presentations from the selection frame, click a file name and press and hold Shift while selecting another file name. The first selection, the last selection and all files in between are selected.

- To select multiple files, not necessarily in a series, hold down Ctrl while clicking file names in the selection panel.

- To deselect items, click outside the Name column or on empty white space.

- Double-click to select and dismiss the Open dialog box.

6 Click OK.

If the first document in a presentation uses a Database Connection requiring log on, you are prompted by the Database Login dialog box.

7 If prompted by the Database Login dialog box, enter a User ID and password for the Database Connection. Select the Save User ID and Password option to store log on credentials for the Database Connection, and click OK.

The selected presentation (and other selections) are displayed as content tabs below the content area. The first document in the selected presentation is opened and displayed as the current document.

In the Open dialog box, you can select multiple documents and presentations. If you select multiple documents, documents are opened in the order in which they are listed in the Selection frame.

If you open multiple presentations containing the same document, only the first instance of the document is opened. It may appear that the document did not open or opened in the wrong order. Only one instance of a document can be opened (and modified).

Closing Presentations

► To close all opened presentations, select **File**, then **Close All**.

For previously saved changed files, a Save Changes prompt is displayed. For files not previously saved, the Save As dialog box is displayed. See [“Saving Documents” on page 31](#).

Creating Presentations

► To create presentations:

1 Select **File**, then **New**, then **Presentation**.

The Process bar displays steps for creating presentations: Content, Order, and Image. The Presentation wizard displays the View Pane Browser tab, from which you select documents and folders from the repository.

2 Navigate to a location that contains a document, folder, or link, and add one or more files to the presentation playlist by performing one or more actions:

- Select a file on the Browser tab, and click the **right arrow** button.
- To select consecutively listed documents, select a file name, press **Shift** and select another file name. The first selection, the last selection, and all files between the first and last selection selected. Click the **right arrow** button.
- To randomly select documents, press and hold **Ctrl** while selecting multiple file names. The files you click are selected. Click the **right arrow** button.

Your selections are displayed in the Presentation Content list.

3 **Optional:** To remove content from the selected presentation content pane, on the Content page, perform one or more actions:

- Select a file name, and click the **left arrow** button.
- Select a file name, press **Shift**, select another file name, and click the **left arrow** button.
- To randomly select documents, press and hold **Ctrl** while clicking multiple file names. The files you click are selected. Click the **left arrow** button.

4 **Optional:** To reorder the selected content, on the Order page, perform one or more actions:

- Select a file and click an **Up** or **Down** arrow button.
- Select a file name, press **Shift**, select another file name, and click the **Up** or **Down** arrow.
- Press and hold **Ctrl** while selecting multiple file names, and click the **Up** or **Down** arrow..

5 **Optional:** To select an image for the presentation icon:

- a. Click **Select Graphic**.

The **Open** dialog box is displayed.

- b. Navigate to a folder that contains a JPG or GIF image file, and select a file.
- c. Click **Open**.

Your image is displayed as the desktop button image on the Presentation wizard.

6 Click **Finish**.

The **Save As** dialog box is displayed that lists the current folder contents by location.

7 Navigate to the folder into which you want to save your presentation and, in **Filename**, enter a name.

8 Click **OK**.

The presentation is saved to the specified location, using the specified name.

Editing Presentations

Options for modifying presentations:

- You can edit a presentation by changing the content, order, and presentation icon and saving these changes.
- You can also copy a presentation and paste it to another location, where it can be modified without impacting the original presentation. You can not save a presentation under another name or to another location (**Save As**).

See [“Copying Files” on page 46](#).

➤ To modify presentations:

1 Right-click a presentation file name and select **Edit**.

The Presentation Wizard is displayed with the **View Pane Browser** tab.

2 **Optional:** In the **View Pane Browser** tab, navigate to a location containing a document, folder, or link that you would like to add to the presentation.

3 **Optional:** To add a file to the presentation playlist, perform one action:

- Select a file on the **Browser** tab, and click the **right arrow** button.
- To select a series of files in a folder, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click the **right arrow** button.
- To select multiple documents in a folder that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click the **right arrow** button.

Your selections display in the **Presentation Content** list.

4 **Optional:** To remove content from the selected presentation content panel, perform one action:

- Click the file name on the **Content** page and click the **left arrow** button.

- Right-click a file on the Content page and select **Remove** from the shortcut menu.
- To deselect a series of files, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click the **left arrow** button.
- To select multiple documents that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click the **left arrow** button.

5 Optional: Click Next.

6 Optional: To reorder the selected content, perform these actions:

- Select a file on the Order page and click **Up** or **Down** arrow button to reposition the file in the playlist.
- Right-click a file and select **Move Up** or **Move Down** from the shortcut menu.
- To select a series of files, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click an **Up** or **Down** arrow button to reposition the files in the playlist.
- To select multiple documents in a folder that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click an **Up** or **Down** arrow button to reposition the files in the playlist.

7 Optional: To select an image for the presentation icon:

- a. Click **Select Graphic**.
The **Open** dialog box is displayed.
- b. Navigate to a folder containing a JPG or GIF image file, and click to select the file.
- c. Click **Open**.
Your image is displayed as the **Desktop Button Image** on the Presentation wizard. Clicking **Clear**, restores the default desktop button image.

8 Click Finish.

5

Managing Files and Folder

In This Chapter

| | |
|--------------------------------------|----|
| Web Analysis Repository | 39 |
| Folders | 41 |
| User and Group Folders | 41 |
| Files | 42 |
| Shortcuts and Links..... | 42 |
| Working with Files and Folders | 42 |
| Setting File Properties | 43 |
| File and Folder Shortcut Menus | 44 |

Web Analysis Repository

The repository stores system data in relational database tables—at a shared, local area network location. In the View Panel Browser tab, Web Analysis Studio presents the repository as a file management system.


Browser Tab

The Browser tab is one of three View Pane tabs.

The navigation panel of the Browser tab displays the repository as a node tree. You see only the files and folders to which you are granted access, typically, your folder and folders of groups to which you belong.

You can expand, collapse, explore, and select from the repository in the course of your analysis, presentation, and reporting. The Selection frame of the Browser tab presents the contents of the folder currently selected in the Navigation frame.

Accessing the Browser Tab

- To display the View Pane Browser tab from the menu bar, Select **View**, then **View Pane**, then click .

Setting the View

You can display repository contents in the Browser tab in three ways:

- **Detail**—Displays file names in a vertical list and provides file type and last modified information.
 - **Icon**—Displays file icons horizontally and vertically
 - **List**—Displays file names in a vertical listing
- To set the view, select **View**, and one of three options: **Icon**, **List**, or **Detail**.
 - To refresh the interface, select **View**, then **Refresh**.

Filtering the Browser Tab

You can restrict the objects displayed in the Browser tab and thus reduce the number and kinds of items displayed in the selected folder.

- To filter the Selection frame of the Browser tab:
 - 1 Select **View**, then **Display Items of Type**.
 - 2 Select one option:
 - **All**—displays all files, regardless of type
 - **Document**—displays only documents
 - **Presentation**—displays only presentations
 - **Database Connection**—displays only database connections

Resizing the Browser Tab

You can resize the Navigation frame, the Selection frame and the View Pane Browser tab.

- To resize vertically the Navigation and Selection frames of the Browser tab, hover the cursor over the border between the frames, and when it changes to a double arrow, click and drag.
- To resize horizontally the Browser tab, hover the cursor over the border between the View Pane and the Content area, and, when it changes to a double arrow, click and drag left or right.
- To show or hide the View Pane, select **View**, then **View Pane**.

Folders

By default, Web Analysis Studio installs three folders:

- The *root* folder, specified by a slash (/), contains all other files and folders.
- The *Groups* folder, directly below the root folder, is intended to contain all group folders. The Groups folder contains a default group folder, named *Everyone*, that enables users to be managed collectively.
- The *Users* folder, directly below the root folder, is intended to contain all user profile folders.

While administrators can see all folders and files, you can see only the files and folders to which you are granted access, typically your own folder and folders of groups to which you belong.

Note: As with all file systems, though the default directories, folders, and files were designed for a purpose there is nothing to prevent you from diverging from this original design. Consider this, when giving users and groups access and permissions to the repository. See [“Setting File Properties” on page 43](#).

User and Group Folders

User folders and group folders contain this standard set of folders:

Databases—Database connections.

Desktop—Presentations to be displayed on the desktop

Favorites—Most commonly sought content




Every user profile and group profile features a Favorites folder. Files in the Favorites folder are presented for quick access in the Open dialog box, the Save dialog box, and under the Go / Favorites menu, based on the active user specified by preferences.

Reports—Other repository files

Profiles—Preference files used to customize application look-and-feel and behavior

Files

User folders, group folders, and their subfolders organize and manage *files*, *shortcuts*, and *links*. There are four kinds of files:

- Database Connection —Define the terms, conditions and method for connecting to a data source.
- Oracle's Hyperion® Web Analysis Documents —Synthesize formatting definitions and analysis tools definitions with the data values returned from the data source.
- Presentations —Playlists of documents, enabling documents to be grouped, organized, ordered, distributed, and reviewed.
- Preferences—Customize application look and feel, and behavior.

Although multiple preference files can be defined, only one can be current. You can also change the active preference file to a preference file shared by users.

Shortcuts and Links

Shortcuts, which are used for navigation, can link to folders, files, or links. Shortcuts do not grant access to their targets.

If you encounter a broken shortcut (the result of a target being renamed or moved or a location deleted), use caution. Another administrator may be updating a dynamic target. You restore a broken shortcut by creating an object with the specified name at the specified location.

A unique identifier is assigned to every element in the repository. *Links* use the identifiers to reference folders, files, shortcuts, and other links. Links are fixed, presenting their target in the current folder, regardless of where the targets are located or whether the targets are renamed.

Links simplify maintenance by enabling information stored at one location to be accessed from multiple locations.



If you encounter a broken link (the result of a deleted target), delete the link. You cannot restore a broken link. You must recreate it.

Links to broken links are displayed as broken links, even though they are operating correctly. You must identify and repair the broken link in the chain.

Working with Files and Folders

The repository management system supports most standard operations.

- To expand a folder in the Navigation frame, click the plus sign (+) node next to the folder.
- To expand a folder and display its contents in the selection frame, double-click the folder icon or name.
- To collapse an open folder, click the minus sign (-) node.
- To select a file, select the file icon or its name.
- To select a series of files, select the first file in the series, press **Shift** and select the last file in the series.
- To select multiple files that are not in a series, press and hold **Ctrl** while selecting the files.

Setting File Properties

All repository elements have general and users/groups properties.

- To display file properties of repository files in the Browser tab, right-click a file name, and select **Properties**.

File properties can be set on the following tabs:

- [“General Properties Tab” on page 43](#)
- [“Advanced Properties Tab” on page 43](#)

General Properties Tab

- **Name**—Artifact name
- **Description**—User-supplied description
- **Type**—Indicates whether the artifact is a folder, file, shortcut, or link (read-only)
- **Owner**—File creator, a user who can change permissions by default (read-only)
- **Location**—Repository location of the file (read-only)
- **Created**—The time that the artifact was created
- **Modified**—The time that the artifact was last modified

Advanced Properties Tab

Advanced file properties apply to all users and groups:

- **HTML Client Override Template**—JavaServer Pages (JSP) template used to convert documents to HTML Web pages when opened in Oracle Enterprise Performance Management Workspace, Fusion Edition

- **HTML Export Override Template**—JSP template used to convert Web Analysis to HTML Web pages using File, then Save As HTML; output location is specified in the Save dialog box
- **HTML Batch Export Template**—JSP template used to convert Web Analysis to HTML Web pages when running batch export programs
- **Document Usage**—Restricts subsequent users from drilling up, drilling down, accessing shortcut menus, and changing the display type

Notes on JSP Templates

- Web Analysis Studio converts Web Analysis to HTML Web pages using predefined JSP templates.
- All JSP templates must be located in your application server's Web Publishing template subdirectory (`wp_templates`), and all templates must be specified by name (including the JSP file extension).
- When no JSP template is specified, Web Analysis Studio uses the `report_publish.jsp` template in `\webapps\WebAnalysis\templates`.
- When you publish presentations, a directory named for the presentation is created in the application server's Web publishing output directory (`wp_output`), if no other directory is specified. When you use the Batch Utility, the default output file location is the application server's Web publishing output directory (`wp_output`), if no other directory is specified; however, you can enter a parameter that specifies an alternate output location.

Related Topics

[“Modifying Document Properties” on page 31](#)

[“Changing and Locking Display Types” on page 101](#)

File and Folder Shortcut Menus

Files and folders share a shortcut menu. Menu items are enabled and disabled based on user profile permissions, object type, and file state.

Topics that discuss shortcuts:

- [“Opening Files” on page 45](#)
- [“Editing Files” on page 45](#)
- [“Adding Files to Favorites” on page 45](#)
- [“Adding Files to the Desktop” on page 46](#)
- [“Copying Files” on page 46](#)
- [“Copying and Pasting Links” on page 46](#)
- [“Moving Files” on page 47](#)
- [“Renaming Files” on page 47](#)

- “Deleting Files” on page 47

Opening Files

Opening functionality differs by file type and access permissions.

- To open a file, right-click the file name, and select **Open**.

| File Type | Open Command Result |
|---------------------|--|
| Document | The document opens in the content area. |
| Database Connection | Opens an auto-populate dimension document. The database connection is used. The highest aggregate members of the time and measures dimensions are used to populate the row and column axes of a spreadsheet. |
| Presentation | All documents in the presentation playlist open in the content area. |
| Shortcut or Link | Depending on the file type of the target file, a document, a spreadsheet, or all documents in a presentation open. |

Editing Files

Editing functionality differs by file type and permission access.

- To edit files, right-click a file name, and select **Edit**.

| File Type | Edit Command Result |
|---------------------|--|
| Document | The document opens in Document Designer, enabling you to create a custom document. |
| Database Connection | The database connection wizard opens, enabling you to set data source parameters. |
| Presentation | The Presentation Wizard opens. |
| Shortcut or Link | Depending on the file type of the target file, a document or wizard opens. |

Adding Files to Favorites

All user and group profiles include a Favorites folder. Files in the Favorites folder are listed in the Open and Save dialog boxes, and under the Go / Favorites menu.

- To create shortcuts to files in the Favorites folder, right-click a file name, and select **Add To**, then **Favorites**.

Note: Because shortcuts are location based, their target files must remain at their original locations. Links, however, reference files through unique identifiers that travel with the files. To create a file link in the Favorites folder, use the **Copy / Paste Link** shortcut menu option.

Adding Files to the Desktop

All user and group profiles include a desktop folder. The desktop folder contains the presentation for which icons are displayed on the desktop. While all files can be saved to the desktop folder, only presentation icons are displayed on the desktop.

All users and groups have a desktop folder. The current desktop folder is the folder of the active user.

- To create shortcuts to presentations in the desktop folder, right-click a file name, and select **Add To**, then **Desktop**.

Copying Files

When you copy files, other than for links, to other locations, the files adopt the file permissions set for the new location (the new folder). Therefore, you need not coordinate file permissions of copied files with file permissions of target locations.

- To copy files and paste them as files or shortcuts:
 - 1 Right-click a file name, and select **Copy**.
 - 2 Navigate to the location where you want to create a copy of the original file.
 - 3 Right-click the **View Pane Browser** tab selection frame and select an option:
 - **Paste**—Copies the original file
 - **Paste Shortcut**—Creates a reference to the location of the original file.

Note: Files copied to other locations adopt the file permissions set for the new location. To control access to copied files, consider copying links, not files. You can grant unlimited access to links, while restricting access to their target files.

Copying and Pasting Links

When you paste copied files as a link, you must coordinate access between the links and the original files. You do not want to create links to files that cannot be accessed, or links with universal access permissions that override restricted access.

If no file permissions are set, the target files and the links are assigned Read access permissions.

- To copy files and paste them as links:
 - 1 Right-click a file name and select **Copy**.
 - 2 Navigate to the preferred location.
 - 3 Right-click the Selection frame of the View Browser tab, and select **Paste Link**.

A link is created at the current location.

Moving Files

When you cut and paste (or move) a file, the file retains its original file permissions without regard for the file permissions of its new folder location.

➤ To move files:

- 1 Right-click a file name, and select **Cut**.
- 2 Navigate to the preferred location.
- 3 Right-click the Selection frame of the View pane Browser tab, and select **Paste**.

Renaming Files

➤ To rename files, right-click the file name, and select **Rename**.

Deleting Files

➤ To delete files, right-click the file name, and select **Delete**.

6

Creating Documents

In This Chapter

| | |
|---|----|
| About Documents..... | 49 |
| Modifying Queries..... | 56 |
| Selecting Dimension Members..... | 59 |
| Searching for Members..... | 63 |
| Searching For SAP BW Characteristic Values..... | 64 |
| Locating Dimension Members..... | 65 |
| Selecting Members Using Essbase Subsets..... | 66 |
| Selecting Financial Management User Defined Fields..... | 68 |
| Filtering by SAP BW Member Properties..... | 69 |
| SAP BW Select Top/Bottom..... | 70 |
| Selecting SAP BW Period to Date..... | 71 |
| Providing SAP BW Variables..... | 72 |
| Selecting Financial Management Member Lists..... | 72 |
| Selecting Substitution Variables..... | 72 |
| Creating and Selecting Personal Variables..... | 73 |
| Creating and Applying Points of View..... | 74 |
| User POV..... | 76 |
| Defining Dynamic Time Series Selections..... | 76 |
| Defining Previous Member Selections..... | 77 |
| Selecting Attributes..... | 77 |
| Turning Off Key Figure Attributes..... | 78 |
| Creating Calculated and Restricted Key Figures..... | 78 |

About Documents

Documents display data values returned from the data source in a data object. Multiple data objects can occupy a document, and each data object's display type can differ:

- Spreadsheet
- Chart
- Pinboard
- SQL Spreadsheet

- Free-form grid

Each display type has prerequisites.

- Pinboards are generated from spreadsheets and charts, and they require traffic lighting definitions. See [“Creating Pinboards” on page 185](#).
- Because custom documents use component combinations that differ, there is no single process for creating custom documents. See [“Creating Custom Documents” on page 211](#).
- SQL spreadsheets enable you to query a relational data source, and display the returned data values on a custom document. You must understand how to compose a SQL query to create a SQL spreadsheet. See [“Creating SQL Spreadsheets” on page 193](#).
- Free-form grids enable you to combine data values from multiple data sources in one data object. Free-form grids leverage custom document database connections. See [“Creating Freeform Grids” on page 203](#).
- You can change spreadsheets into a wide variety of charts. See [“Changing and Locking Display Types” on page 101](#).
- Finally, each display type has formatting options. See [“Formatting Options” on page 91](#).

To create a document you are required to specify:

- Data source—Provides data values, including date and text as data in cells. See [“Date and Text Cell Behavior” on page 50](#)
- Data object—Displays these values
- Query—Gets data values from the data source and returns them to the data object.

You can set properties that customize each element.

The database connection wizard specifies the type of data source, logon credentials, database applications, dimension formatting and drill-through properties.

Each data object can be set to a display types that features formatting options.

Queries can be explicit, requesting information on dimension members, or dynamic, requesting information about a dimension member that satisfies a set of criteria.

Topics that discuss the three primary ways to create documents:

- [“Creating Documents” on page 51](#)
- [“Creating Documents from Existing Documents” on page 54](#)
- [“Creating Auto-Populate Dimension Documents” on page 55](#)

Date and Text Cell Behavior

Data cells can store and display text and dates as data in specific Measure members that have been defined in the outline. Essbase Report Scripts allow for the query and display of these Measure types.


- If a Text or Date measure exists in a Filter, multiple selections are disabled.
- If a Text or Date measure is selected in a Page, Analysis Tools cannot be rendered or applied; only formatting can be applied (but not conditional formatting).
- Analysis Tools, where the context (selected member in row or column) is a Text or Date Measure, no Analysis Tools can be created except for Formatting.
- Analysis Tools, where the selected members are a Text or Date Measure (for example, column of Year dimensions is AT context, date measures in rows), Sort and Top/Bottom will render based on what Essbase returns. Other Analysis Tools will not be applied, except for Formatting.

Creating Documents

A wizard guides you through creating Web Analysis Studio spreadsheets and charts. The wizard requires that you know where a database connection is located, and have permission to use it.

► To create a document:

1 Perform one:

- Select **File** then, **New** then, **Document Wizard**.
- Click , and select **Document Wizard**.
- Press **Ctrl+Shift+N**.

The Process bar displays steps for creating documents. Because the repository stores document definitions and not document data, you must identify a data source, and the parameters for connecting to it.

2 Perform one:

- In the text area, enter the path from the root directory (/) to a database connection, including the file name.
- Click **Browse**, select a database connection file from the **Open** dialog box, and click **OK**.

3 **Optional: Select Auto-Populate Dimensions to automatically populate and display a simple spreadsheet.**

Selecting the Auto-Populate Dimension option and clicking Finish skips the remaining steps in the process. Auto-Populate Dimension uses the highest aggregate members of the time and measures dimensions to populate the rows and columns axes of a spreadsheet. This is the quickest method to display a simple spreadsheet using the wizard.

4 **Optional: Select Use Point of View to populate the query from a predefined point of view (POV) definition.**

Selecting Use Point of View and clicking Next inserts the dimensions and members that are of interest to you in documents. You can define multiple POV definitions, but Use Point of View only applies the current POV set in preferences.

Selecting Auto-Populate Dimension and Use Point of View and clicking Finish skips the remaining steps in the process and displays a simple spreadsheet using the active POV.

5 Click Next.

In Step 2: Select Row Dimension, you must select the dimensions to be used on the Rows axis. You must have at least one Row axis dimension and one Column axis dimension.

6 Move a dimension name from Filters to Rows:

- Double-click a dimension name in **Filters**.
- Select a dimension name in **Filters** and click the right arrow button.

The dimension name is displayed in the Rows frame. If no POV definition is applied in Step 1, the highest aggregate member in this dimension is used. If a POV definition is applied, its member selections are used.

7 Optional: To specify dimension member selections, double-click the dimension name hyperlink in Rows.

The Dimension Browser dialog box is displayed. The dimension is presented as a node tree in the Browse frame. You must select dimension members in Browse and move them to Selections:

- To expand or contract the dimension hierarchy:
 - Double-click dimension member names
 - Click the plus sign (+) or minus sign (-).
- To select dimension members, click the dimension member name.

A check mark is displayed in the check box of selected members, and the member name is displayed in the Selections list.
- To select dimension members dynamically, right-click a dimension member name and select an advanced member selection method.
- You can set the label mode for each dimension to the default label, an ID label, or the alias table description set in Database Preferences dialog box, through preferences.

See [“Selecting Dimension Members” on page 59](#).
- Click OK to dismiss the Dimension Browser dialog box and return to the Wizard.

8 After indicating all Rows axis dimensions, and defining their member selections, click Next.

9 Using the same methods used to define Rows, move a dimension name from Filters to Columns.

10 Optional: Using the same Dimension Browser methods, double-click the dimension name hyperlink in Columns to specify member selections for the Column axis.

11 Click Next.

In Step 4: Select Page Dimensions, you can select dimensions to be used on the Page axis. While all intersections in the document are relative to all dimension member selections, you can organize these row and column intersections by page dimension members.

12 Optional: Using the same methods used to define Rows and Columns, move a dimension name from Filters to Pages.

13 Optional: Using the same Dimension Browser methods, double-click the dimension name hyperlink in Pages to specify member selections for the Page axis.

14 Click Next.

In Step 5: Customize Filters, you select dimension members to be used on the Filters axis.

All cube dimensions participate in every spreadsheet intersection, regardless of the axis to which dimensions are assigned. The arrangement of intersections is defined by the Rows, Columns and Pages axes. The data values displayed at each intersection are determined by the member selections.

all intersections in the data object are relative to Filter dimension member selections. Filter dimension member selections focus the intersections, the data values, and consequently the data object analysis.

Cube dimensions left in the Filter axis are by default represented by the highest aggregate dimension member defined in the data source outline. If a POV definition is applied, its member selections are used. If you make Filter member selections, all intersections are relative to these selections.

15 Optional: To display the Dimension Browser for Filter axis dimensions, perform one:

- Select a Filter dimension and click **Customize**.
- Double-click a dimension name hyperlink in **Filters**.

16 Optional: Using the same Dimension Browser methods, make **Filter** axis dimension member selections and click **OK**.

17 Click Next.

In Step 6: Set Options, you can set a variety of document options

18 Optional: In the **Select Layout** list, select one:

Chart—Displays the result set as a chart data object.

Spreadsheet—Displays the result set as a spreadsheet data object.

Vertical Combination—Displays the result set as a chart data object and a spreadsheet data object stacked vertically.

Horizontal Combination—Displays the result set as a chart data object and a spreadsheet data object arranged side-by-side.

Custom—Displays a blank palette

You can change the display type of the Vertical Combination and Horizontal Combination layouts; for example you can convert the spreadsheet to a chart type. The objects, however, are linked and maintain a coordinated context.

In case you select a layout, the Data Layout dialog box is displayed.

- Select dimensions and members and click **OK** to generate a Web Analysis document.

19 Optional: You can set the default Label mode to display dimension member IDs, or the alias table description set in database preferences.

This centrally sets all dimensions using the default Label mode to the same setting.

20 Optional: To suppress the display of one or more type of data, click the corresponding check box.

Missing Columns—Columns of data comprised of missing values.

Missing Rows—Rows of data comprised of missing values.

Shared Members—Dimension members that are used in multiple locations of one hierarchy.

Zero Rows—Rows of data comprised of zero (0) data values.

- 21 Optional:** To suppress the display **Linked Reporting Object Indicators**, click the corresponding check box.

Linked Reporting Object Indicators are orange triangles indicating Related Content definitions in Essbase.

- 22 Optional:** To augment the query with a server-based **Retrieve Only Top/Bottom** analysis, click the corresponding button.

See [“Retrieve Only Top/Bottom” on page 124](#).

- 23 Optional:** To augment the query with a server-based **Restrict Data** analysis, click the corresponding button.

See [“Restricting Data” on page 122](#).

- 24 Click **Finish**** to submit the query to the data source.


The data source is queried. The result set returned is displayed as a data object on a document.

Creating Documents from Existing Documents

When you save a document with other names or to other locations, you use the data source, data object, and query defined by a document. This document creation option leverages existing documents to save time and effort. Before saving the document under a different name, or to another location, you can modify document properties and settings as needed.

- To create documents from existing documents:

- 1 Perform one:**

- Select **File**, then **Open**.
- Click .

The Open dialog box is displayed. It features a selection frame that lists the current folder contents specified by **Location**.

- 2 Select **Web Analysis Document** from **Files of Type**.**

- 3 Navigate to the document you want to copy.**

- 4 Select the document, and click **OK**.**


If the document uses a Database Connection requiring you to log on, the Database Login dialog box prompts you.

- 5 If prompted by **Database Login**, enter a User ID and password for the Database Connection. Click **Save User ID and Password** to store log on credentials for the Database Connection, and click **OK**.**

The selected document is displayed in the content area.

6 Modify the document.

7 Perform one:

- Select **File**, then **Save As**.
- Click .
- From the Contents Tab bar, right-click the current content tab and select **Save As**.

The Save As dialog box is displayed. It features a selection frame that lists the current folder contents specified by **Location**.

8 Navigate to the folder to save your modified document.

9 Optional: Enter a name for the document in **Filename**.

10 Click OK.

The modified document is saved to the specified location, using the specified name.

Creating Auto-Populate Dimension Documents

This is the quickest method for creating a document. It specifies the database connection, and assumes use of the highest aggregate members of the time and measures dimensions to populate the rows and columns axes of a spreadsheet. You can modify document properties and settings as needed before eventually saving the document.

Note: You can set the Look and Feel preferences to display Data Layout, instead of assuming use of the highest aggregate members of the time and measures dimension.

➤ To create a Auto-Populate Dimension document:

1 Display the View Pane:

- Select **View**, then **View Pane**.
- Press **F6**.

2 Click the View Pane **Browser tab.**

3 In the repository, navigate to a **database connection file, and double-click the file name.**

If the Database Connection requires you to log on, you are prompted by the Database Login dialog box.

4 If prompted by the **Database Login dialog box, enter a User ID and password for the Database Connection. Select **Save User ID and Password** to store log on credentials for the Database Connection, and click **OK**.**




A Auto-Populate Dimension document is displayed in the content area.

Modifying Queries

Data Layout is an interface used to edit queries. Data Layout displays the dimensions returned by the database connection, as they are arranged on four axes:

- Rows
- Columns
- Pages
- Filters

Three kinds of dimensions are differentiated by these icons:

| Icon | Dimension |
|---|------------------------|
|  | Dimensions |
|  | Attribute Dimensions |
|  | Attribute Calculations |

Every query must have at least a dimension assigned to the Rows axis and the Columns axis, but you can also nest multiple dimensions on one axis. You can organize the Row and Column dimensions by assigning dimensions to the Page axis. Dimensions not assigned to Rows, Columns, and Pages, remain in the Filter axis.

All dimensions participate in every intersection displayed by a data object, regardless of the axis to which they are assigned. You use Data Layout to arrange dimensions, to specify their level of detail, and to specify query options.

Note: All data objects start as spreadsheets. Charts and Pinboards are graphical representations of the data in the spreadsheet.

➤ To redefine the current document's query and dimension layout:

- Click the **Navigate Data Source** toolbar button.
- Select **View**, then **Data Layout**.

➤ To move a dimension between axes, drag the dimension name from its current axis to another axis.

The cursor displays a box next to it when it is over the axis. When you release the mouse button, the Dimension Browser dialog box displays. Use Dimension Browser to make member selections as needed, and click **OK**.

- To make member selections without moving the dimension to another axis, double click the dimension name.
- To clear all dimension member assignments and start over, click **Reset All**.

Topics that discuss query modification:

- [“Modifying Filter Dimensions” on page 57](#)
- [“Data Layout Options” on page 58](#)
- [“Relational Dimension Header Sort” on page 58](#)
- [“Label Mode” on page 59](#)

Modifying Filter Dimensions

All data object intersections are relative to filter member selections, which focus intersections and data values, and consequently, analysis.

Filter-axis dimensions are by default represented by the highest aggregate member defined in the data source outline. To focus analysis on members other than the highest aggregate, you can select filter members.

Filter member selections do not rearrange dimensions or reorganize pages, but focus analysis on intersections.

Note: If the `WebAnalysis.properties` variable `FilterRestrictToSingleMember=true` is set, all users can select one member from the filter selections. In the Dim Browser, only one member can be selected, therefore the right click menu options are limited to “Find in Tree” and “Search”. Users can select one member in the left pane; additional selections overwrite the previous selection.

Behavior Using Multiple Filters

The following describes how Web Analysis retrieves data from Essbase and processes it when using multiple filters:

- Web Analysis uses Essbase report scripts to query Essbase.
- To retrieve top/bottom functionality, Web Analysis uses the Essbase report script commands TOP and/or BOTTOM, so the top/bottom retrievals are passed directly to the Essbase server.
- Similar to Essbase Excel Add-In queries, Essbase report scripts do not support multiple dimension members in a filter. Therefore, for Web Analysis to achieve this, multiple Essbase report scripts are executed – one for each member. The results are summed into one grid in Web Analysis.
- Therefore, when doing a top/bottom retrieval with multiple member filters, the top/bottom results are retrieved from Essbase, one for each filter member, then summed together in WA

Data Layout Options

The bottom of the Data Layout dialog box enables you to specify server-based options in the query:

| Option | Description |
|---|--|
| Default Label Mode | Sets all dimensions using the default label mode to: <ul style="list-style-type: none">● Descriptions—Current alias table specified by database preferences● IDs—Unique ID label● Both—When using Oracle Hyperion Financial Management, Fusion Edition, you can specify ID and Description simultaneously |
| Use Point of View | Enables and disables the active POV definition defined on the current database connection. |
| Retrieve Only Top/Bottom | Displays the Retrieve Only Top/Bottom dialog box, used to limit and rank the query result set. |
| Restrict Data | Displays the Restrict Data dialog box, used to restrict the query result set based on criteria. |
| Show Linked Reporting Object Indicators | Shows/Hides the orange triangle symbols that indicate Related Content definitions in Essbase. |
| Suppress | Omits components, as selected, from the query result set: <ul style="list-style-type: none">● Missing Columns—Columns of data comprised of missing values● Missing Rows—Rows of data comprised of missing values● Shared Members—Dimension members that are used in multiple locations of one hierarchy● Zero Rows—Rows of data comprised of zero data values |
| Display Entity Currency | When using an Financial Management data source with defined Entity dimension currency information, you can enable the Display Entity Currency option, to append the Entity dimension members with their currency value. This can be set before querying using Data Layout options, after querying using the Data Display shortcut menu, and for all subsequently created documents using OLAP Server preferences. See “Financial Management” on page 168 . |
| Use User Point of View | Selecting it adds a member selection to the Dim Browser for every dimension in the ReportDataSrc. The selected members in the User POV are utilized in the spreadsheet. |

Relational Dimension Header Sort

You can also order the result set returned by the SQL query in a relational database connection. You can opt for Ascending, Descending, Selection Order and Default. Default is the natural order in which dimension members are returned, based on the data source outline. Selection Order is the order in which members were selected in Dimension Browser.

You must be aware that unlike OLAP servers, relational cubes are compiled and defined by Web Analysis Studio. The current label mode, alias tables, and selection orders from Dimension Browser are manually coordinated. Sort by alias may perform comparatively slow, as the default query result set is sorted by ID, and sorting by alias requires a complete client-side re-sort.

In addition, the source of the relational dimension header sort impacts performance. Defining a relational dimension header sort using Data Layout sorts all dimensions as part of the query result set being displayed.

You alternatively, can sort a relational dimension using the data object shortcut menu: Data Display / Dimension Header Sort. This method requires you to right-click a dimension header.

Lastly, you can apply dimension header sort definitions to relational generation defined in the Generation Editor. These definitions only impact the sort ordering displayed by the Dimension Browser however. Using the Order By Mode list, you can also specify to order members by ID or Alias.

Label Mode

You can set the default label mode to ID or Description in Data Layout. This setting impacts only those dimensions set to display the Default label mode in Dimension Browser.

The Description label comes from the alias table setting, saved per database connection and per active user as a database user preference.

You can set the default label mode before querying using Data Layout options or the last step in the wizard, and after querying using the data object shortcut menu. You can specify which description label to use in dimensions, using Dimension Browser and the data object shortcut menu.

➤ To set the default label mode for the current database connection:

- 1 Click **Options** in the lower left corner of the Data Layout dialog box.
- 2 Select **Default Label Mode** from the menu.
- 3 Select the **IDs** or **Descriptions** option.

Note: Financial Management users have the additional label mode option of Both.

See [“Setting the Label Mode” on page 94](#).

Selecting Dimension Members

Dimension Browser, an interface for selecting members and refining database queries, is used with the document wizard, Data Layout dialog box, Information panel, or on its own.

The Dimension Browser presents dimensions as a node tree in the Browse frame. You must select dimension members from Browse and move them to Selections.

Members can be selected individually, by familial relationships, by data-source-specific options, or from predefined selection lists.

➤ To access the Dimension Browser:

- Right-click a dimension member label on a data object, and select **Browse**.

- In the View Pane **Information Panel** tab, right-click a dimension label and select **Browse**.
- Click the **Navigate Data Source** toolbar button, and double-click a dimension name.
- Click the **Navigate Data Source** toolbar button, and drag a dimension between axes. Relocating a dimension, prompts you to select members.

➤ To expand or collapse the dimension hierarchy:

- Double-click dimension member names
- Click the plus sign (+) or minus sign (-) nodes.

➤ To select a dimension member, click the member name in the **Browse** frame.

A check mark is displayed in the check boxes of selected members, and the member name is displayed in the Selections list. You cannot select the database connection name at the top of the node tree.

➤ To select dimension members dynamically, right-click a dimension member name and select an advanced member selection method from the list.

See [“Advanced Member Selection” on page 61](#).

➤ To remove members from the selection list:

- Select the member name in the **Selection** list and click **Remove**.
- Click the dimension member name in the **Browse** list again.

➤ To remove all members from the selection list, click **Remove All**.

➤ To set the label mode for the dimension, click a **Dimension Labels** option:

- Use Default—Preferences default label mode.
- Descriptions—Current alias table specified by database preferences.
- IDs—Unique ID label.
- Both—When using Financial Management, you can specify ID and Description simultaneously.

The label displayed by the Description label mode is drawn from the alias table specified by the active user’s database preferences. You can set the alias table for each Active Preferences user ID or group ID.


You can specify label mode in dimensions, using Dimension Browser and the data object shortcut menu.

You can set a default label mode before querying the data source using Data Layout options or after querying using the data object shortcut menu.

See [“Alias Tables” on page 263](#).

Advanced Member Selection

In dimensions with large member sets, you can easily define selections using the Dimension Browser shortcut menu. Right-clicking dimension member names enables selection by familial relationship and data source-specific options:

| Icon | Shortcut Menu Command | Selects: |
|---|-------------------------|---|
|  | Also Select Children | Currently selected member and its children (one level below) |
|  | Also Select Descendants | Currently selected member and its descendants |
|  | Select Parent | Direct parent of the selected member |
|  | Also Select Ancestors | Currently selected member and its ancestors |
|  | Also Select Siblings | Currently selected member and members on one level with identical parent ancestor |
|  | Select Dim Bottom | All dimension members on the lowest level of the hierarchy |
|  | Select Dim Top | Highest ancestor |
|  | Also Select Level | Currently selected dimension member and all dimension members on one level |
|  | Also Select Generation | Currently selected dimension member and all dimension members in one generation |
|  | Also Select Previous | A number of previous members at one dimension level |
|  | Also Select Subset | An Essbase member subset |
| | Substitution Variables | Sets a substitution variable as the dimension selection |
|  | Select Attribute | A selection from a list of attribute dimensions |
| | User Defined Fields | Financial Management—One of three pre-defined attribute values . Select members featuring these attribute values and compose compound selection statements with AND and OR operators |
| | Dynamic Time Series | Essbase Dynamic Time Series selection (for example: History To Date, Quarter To Date) |
| | Search | Locates dimension members in large dimensions with search criteria, and adds found members to the Selection list |
| | Find In Tree | Locates dimension members in large dimensions Expands the dimension hierarchy, but does not add found members to the Selection list |

Advanced Member Selection by Data Source

| Data Source | Advanced Member Selection Method |
|-------------|---|
| Essbase | <ul style="list-style-type: none"> ● Also Select Children ● Also Select Descendants ● Select Parent ● Also Select Ancestors ● Also Select Siblings ● Select Dim Bottom ● Select Dim Top ● Also Select Level ● Also Select Generation ● Also Select Previous ● Select Subset ● Substitution Variables ● Select Attribute ● Dynamic Time Series ● Search ● Find in Tree |
| SAP BW | <ul style="list-style-type: none"> ● All Members ● Select Dim Top ● Select Dim Bottom ● Also Select Descendants ● Select Parent ● Also Select Ancestors ● Also Select Children ● Also Select Siblings ● Also Select Level ● Select At Level ● Also Select Previous ● Also Select Next ● Dynamic Time Series ● Select Top/Bottom ● Filter on Member Properties ● Find in Tree <p>See "SAP BW" on page 171.</p> |

| Data Source | Advanced Member Selection Method |
|------------------------------|---|
| Financial Management | <ul style="list-style-type: none"> ● All Members ● Select Dim Top ● Select Dim Bottom ● Also Select Descendants ● Member List ● Also Select Children ● User Defined Field ● Search ● Find in Tree <p>See “Financial Management” on page 168.</p> |
| JDBC Relational Data Sources | <ul style="list-style-type: none"> ● Also Select Children ● Also Select Descendants ● Select Parent ● Also Select Ancestors ● Also Select Siblings ● Select Dim Bottom ● Select Dim Top ● Also Select Generation ● Find in Tree |

Consider the implications of the relational hierarchy in advanced member selections on relational data sources. When the highest ancestor is selected, a default dimension member may be used instead of the aggregation. The relational hierarchy may also equate Also Select Children and Also Select Descendants for example.

Advanced member selection methods depend on your data source implementation.

Searching for Members

Essbase users can locate members in large dimensions using search criteria. These searches can be conducted inside the Dimension Browser dialog box when composing a query, or from the data object shortcut menu when analyzing a document.

- To search for Essbase dimension members in Dimension Browser:
 - 1 Right-click a dimension member in the Dimension Browser, and select **Search**.
 - 2 Enter search criteria in the corresponding text boxes, and click **OK**.

| Search Criteria | Control | Description |
|-----------------|---------|--|
| Member | | The text string for the search function. |

| Search Criteria | Control | Description |
|-----------------|-------------|---|
| Mode | ID | Searches by member name. |
| | Description | Searches by member alias (description). |
| | Both | Financial Management data source enables you to search by ID and Description, using this option. |
| | Expand Tree | When the Expand Tree option is selected, not only is the found member added to the Selections list, but the Browse node tree is expanded to display the found member in the dimension hierarchy. Only the first instance of the search criteria is selected. When the Expand Tree option is not selected, found members are added to the Selections list, without changing the Browse node tree. |
| Range | | Specifies the search of the dimension (All Top Members), or down the hierarchy from the selected member. |
| Option | Whole | Searches on exact match with fully qualified member name or alias. |
| | Substring | Searches for the first, last, or middle part of the member, in the order entered in the member text box. |
| | Beginning | Searches for the start of the member string. |
| | Ending | Searches for the end of the member string. |

► To search for Essbase dimension members in a document data object:

- 1 Right-click a dimension member header and select **Search**.
- 2 Enter search criteria in the corresponding text boxes, and click **OK**.

Note: Search performance is directly related to the size and complexity of the dimension hierarchy.

Searching For SAP BW Characteristic Values

SAP BW users can locate characteristic values in large dimension hierarchies using search criteria. These searches can be conducted only inside the Dimension Browser dialog box when composing a query.

► To locate SAP BW dimension members in Dimension Browser:

- 1 Right-click a dimension member, and select **Search**.
- 2 Enter search criteria in the corresponding text boxes.

| Search Criteria | Control | Description |
|-----------------|-------------|---|
| Mode | ID | Searches by member technical name. |
| | Description | Searches by member alias (description). |

| Search Criteria | Control | Description |
|------------------|------------|---|
| Search Criteria | | A list enables selection from these operands: <ul style="list-style-type: none"> ● Equal To ● >= ● <= ● > ● < ● Between ● Contains Pattern |
| | | Enter the text string for the search function in the text area. Supports the wildcard characters * and +. |
| Execute | | Runs the search function. |
| Filtered Members | | Displays the search result set. |
| | Add | Adds the currently selected member from the Filtered Members list to the Selected Members list. |
| | Remove | Removed the currently selected member from the Selected Members list back to the Filtered Members list. |
| Selected Members | | Displays potential member selections made from the search result set. |
| | Add All | Adds all Filtered Members to the Selected Members list. |
| | Remove All | Removes all Selected Members back to the Filtered Members list. |
| OK | | Adds the Search Selected Members list to the Dimension Browser Selections list. |

- 3 Click **Execute** to run the search function using the criterion specified in the **Mode and Search Criteria** groups.

The search result set is displayed in the Filtered Members group.

- 4 Select members from **Filtered Members**, and click **Add** to add them to **Selected Members**.

Only the members added to the Selected Members list are added to the Dimension Browser Selections list when you click OK.

- 5 Click **OK**.

Locating Dimension Members

In large or complex dimension hierarchies, you can locate known dimension members to select neighboring members. This is a useful alternative to composing a search string for unknown members.

- To find a known dimension member, right-click a dimension member in the Dimension Browser Selections list, and select **Find In Tree**.

In the Browse frame, the dimension hierarchy expands and the first instance of the selected member is highlighted. You can now select other members based on their relationship to the selected member.

Selecting Intervals

- To select an interval:
 - 1 In **Analyze**, open **Dimension Browser**.
 - 2 In **Dimension Browser**, right-click a characteristic and highlight **Select Interval Between**.
 - 3 In the dialog box that is displayed, enter the interval **To** and **From** values.

For example, for a calendar year characteristic, you could enter 1990 to 1993 as the interval to analyze.

Previewing Member Selections

You can preview the dimension members returned by advanced member selections, before you quit the Dimension Browser dialog box.

- To preview advanced member selections for the current dimension:
 - 1 In **Analyze**, open **Dimension Browser**.
 - 2 In **Dimension Browser**, click **Preview Selections**.

The data source is queried using the current Selections list. The result set is displayed in the Preview Selections dialog box.

- 3 Click **Close** to return to the Dimension Browser.

Selecting Members Using Essbase Subsets

Essbase users can define rules that select dimension member subsets by rules composed of data source constructs:

- UDAs—Members with a specified user-defined attribute (UDA)
- Generation—Members belonging to a specified generation of the dimension hierarchy
- Level—Members belonging to a specified level of the dimensional hierarchy
- Expression—Members matching a pattern of wildcard characters
- Attribute dimensions—Members with a specified database-defined attribute
- Conditional logic—Members satisfying advanced subset member selection criteria

You can search all selected member descendants using a maximum of 50 subset conditions. Subset criteria are saved by individual document. Because the filter panel cannot accommodate lengthy selection lists, subset member selections made in Filters are summarized with a description.

Topics that discuss Essbase subset selections:

- [“Defining Member Subset Selections” on page 67](#)
- [“Wildcard Characters” on page 68](#)
- [“Expressions” on page 68](#)
- [“UDAs” on page 68](#)

Defining Member Subset Selections

➤ To define a member subset selection:

- 1 **Right-click a dimension member in the Dimension Browser, and select **Select Subset**.**

The Subset dialog box is displayed. At the top, it indicates dimension members against which the rule is applied. Use the Individual Selection Rule control to compose a rule by selecting components from drop-down lists.

- 2 **Select a subset type: **UDA, Generation, Level, Expression, or Attribute**.**
- 3 **Select an operand for the subset rule: **is (=) or is not (not equal)**.**
- 4 **Select a value for the subset rule from the last drop-down list.**
- 5 **Click **Add** to augment the Total Subset Definition.**

You must add the individual rule to the Total Subset Definition for it to be used. You can define compound and conditional rules by adding multiple rules to the definition, and using Advanced options to connect them:

| Advanced Subset Option | Sub menu | Description |
|------------------------|----------|--|
| Add | | Add the current rule to the Total Subset Definition. |
| Update | | Replace the selected rule with the current rule. |
| Validate | | Verifies the parenthetical syntax of the Total Subset Definition. |
| Remove | | Remove the current rule from the Total Subset Definition. |
| Remove All | | Remove all rules from the Total Subset Definition. |
| Connect | And | Inserts the AND operand at the end of the currently selected rule. The AND operand is used by default when multiple rules are added to the Definition. |
| | Or | Inserts the OR operand at the end of the currently selected rule. |
| Move | Move Up | Moves up the currently selected rule in the Total Subset Definition. |

| Advanced Subset Option | Sub menu | Description |
|------------------------|---------------|--|
| | Move Down | Move the currently selected rule down in the Total Subset Definition. |
| Parenthesis | Add (| Inserts an open parenthesis at the beginning of the currently selected rule. |
| | Add) | Inserts a close parenthesis at the end of the currently selected rule, but before an operand. |
| | Remove (| Deletes the open parenthesis from the beginning of the currently selected rule. |
| | Remove) | Deletes the close parenthesis from the end of the currently selected rule. |
| | Remove All () | Removes all parentheses from the Total Subset Definition. |
| Substitution Variable | | Presents the Substitution Variable dialog box, enabling you to select a pre-defined substitution variable for the subset rule value. |

- 6 **Optional:** To compose a compound subset definition, repeat steps 3 through 6, and click **Add** to augment the Total Subset Definition.
- 7 Click **OK** to finish your subset selection and return to Dimension Browser.

Wildcard Characters

Supported expression wildcard characters include the question mark (?) and the asterisk (*). The asterisk can be used only once in an expression and only at the end of a text string.

Expressions

Subset queries defined by expressions are not dependent upon label mode, and return all strings satisfying the expressions regardless of the alias table. The user is responsible for distinguishing whether the source of the value is the ID, the Description, or from an alias table, and to refine the query if needed.

UDAs

Essbase users can create user-defined attributes (UDAs) for dimension member subsets. A UDA is a word or phrase about the dimension member that is associated with it as a characteristic.

Selecting Financial Management User Defined Fields

Financial Management users can select members with specified attribute criterion. A user defined field is used to define compound selection rules for attributes of a specified value.

- To define a user defined field selection:
 - 1 Right-click a dimension member in the Dimension Browser, and select **User Defined Field**.

The User Defined Field Selection dialog box is displayed. The controls at the top prompt the user to compose a rule by selecting a user defined field and setting it to a value.

2 Select a field: `UserDefined1`, `UserDefined2`, or `UserDefined3`.

The equal sign is the sole operand for the rule.

3 Enter a value for the user defined field.

4 Click **Add to augment the Selection Criteria.**

To be used, the individual rule must be added to the Selection Criteria. Define compound and conditional rules by adding multiple rules to the frame, and use Advanced options to connect them.

| Advanced Option | Sub menu | Description |
|-----------------|-----------|--|
| Add | | Add the current rule to the Total Subset Definition. |
| Update | | Replace the selected rule with the current rule. |
| Remove | | Remove the current rule from the Total Subset Definition. |
| Remove All | | Remove all rules from the Total Subset Definition. |
| Connect | And | Inserts the AND operand at the end of the currently selected rule. The AND operand is used by default when multiple rules are added to the Definition. |
| | Or | Inserts the OR operand at the end of the currently selected rule. |
| Move | Move Up | Moves the currently selected rule up in the Total Subset Definition. |
| | Move Down | Move the currently selected rule down in the Total Subset Definition. |
| Parenthesis | Add (| Inserts an open parenthesis at the beginning of the currently selected rule. |
| | Add) | Inserts a close parenthesis at the end of the currently selected rule, but before an operand. |
| | Remove (| Deletes the open parenthesis from the beginning of the currently selected rule. |
| | Remove) | Deletes the close parenthesis from the end of the currently selected rule. |

5 Optional: To compose compound subset definitions, repeat steps 3 through 5, and click **Add to augment the Selection Criteria.**

6 Click **OK to finish your user defined field selection and return to Dimension Browser.**

Filtering by SAP BW Member Properties

SAP uses the term *member properties* to indicate member attributes. You can select SAP BW members and filter them by their member properties. This requires you to first make a conventional member selection, or advanced member selection, and further define a filtering definition on the selection.

► To select SAP BW members by their member properties:

1 In **Dimension Browser**, make a member selection or advanced member selection.

Your member selection is displayed in the Selection frame.

2 Right-click a member selection in the **Selection** frame and select **Filter on Member Properties**.

The Member Properties dialog box is displayed. The controls at the top prompt the user to compose a rule by selecting a member property, operand and value.

3 From the list, select a member property for the selection dimension.

4 Select an operand from the operand list.

5 Enter a value for the member property.

6 Click **Add**, to add the rule to the filter statement.

You must add the individual rule to the filter definition for it to be used. You can define compound and conditional rules by adding multiple rules to the frame, and use Advanced options to connect them:

| Advanced Option | Sub menu | Description |
|-----------------|-----------|--|
| Add | | Add the current rule to the filtering definition. |
| Update | | Replace the selected rule with the current rule. |
| Remove | | Remove the current rule from the Total Subset Definition. |
| Remove All | | Remove all rules from the Total Subset Definition. |
| Parenthesis | Add (| Inserts an open parenthesis at the beginning of the currently selected rule. |
| | Add) | Inserts a close parenthesis at the end of the currently selected rule, but before an operand. |
| | Remove (| Deletes the open parenthesis from the beginning of the currently selected rule. |
| | Remove) | Deletes the close parenthesis from the end of the currently selected rule. |
| Connect | And | Inserts the AND operand at the end of the currently selected rule. The AND operand is used by default when multiple rules are added to the Definition. |
| | Or | Inserts the OR operand at the end of the currently selected rule. |
| Move | Move Up | Moves up the currently selected rule in the Total Subset Definition. |
| | Move Down | Move the currently selected rule down in the Total Subset Definition. |

7 **Optional:** To compose compound definition, repeat steps 3 through 6, and click **Add** to augment the definition.

8 Click **OK** to finish your filter definition and return to Dimension Browser.

SAP BW Select Top/Bottom

SAP BW enables you to limit the size and rank the query result set on the data source server.

- To limit and rank SAP BW members as part of the query:
 - 1 In **Dimension Browser**, make a member selection or advanced member selection.

Your member selection is displayed in the Selection frame.
 - 2 Right-click a member selection in the **Selection** frame and select **Select Top/Bottom**.

The Top/Bottom dialog box is displayed. The controls prompt you to indicate top or bottom, define criteria, and select a dimension member for ranking.
 - 3 **Select Top or Bottom**.

You cannot select both, as when using Essbase.
 - 4 From the **Using Function** group, select **Percent, Sum, or Count**.

You can select only one method for determining rank.
 - 5 Enter a value for the method.

The Percent text area should be a value between one and a hundred. The Sum text area requires you to enter a threshold. All member values summed to and including the threshold are returned. The Count text area requires only an integer indicating how n top or bottom members to return.
 - 6 In **Order By**, select another cube dimension.

Because all dimensions participate in every intersection, you are required to identify the intersection by which the selected dimension is ranked.
 - 7 **Optional:** Click **Selection** to display the dimension browser for the Order By dimension.

The Dimension Browser dialog box is displayed. You can select a dimension member from the dimension by which to rank the selected dimension, and click OK.
 - 8 Click **OK** to finish your Top/Bottom definition and return to Dimension Browser.
 - 9 Click **OK**.

Selecting SAP BW Period to Date

When Period to Date data is configured on the SAP BW server, you can access data as consolidated by a specified date.

- To select dimension members using SAP BW Period to Date:
 - 1 In **Dimension Browser**, make a member selection or advanced member selection.

Your member selection is displayed in the Selection frame.
 - 2 Right-click a member selection in the **Selection** frame and select **SAP BW Period to Date**.

The SAP BW Period to Date dialog box is displayed. The control prompts you to select a period definition from the list.
 - 3 Select a period definition and click **OK**.

Providing SAP BW Variables

When SAP BW Variables are configured on BEx Query Cube InfoProviders, you are prompted to provide the replacement value for the SAP BW Variable before submitting the query.

Prompting occurs when you click Finish when completing the Document Creation wizard, or when you click OK after modifying a query using the Data Layout interface.

► To provide SAP BW Variable values when prompted:

- 1 In **Database Variables** *ServerName*, read the record for each variable.

It is important to know the variable type, a characteristic value or a hierarchy node.

- 2 Click the **Edit** cell for a variable record.

The Dimension Browser dialog box is displayed. If the record is a characteristic value, you must select one explicit value at the lowest level of the dimension hierarchy. If the variable is a hierarchy node, you can select a value in the dimensional hierarchy.

- 3 Select a characteristic value for the variable type, and click **OK**.
- 4 Repeat steps 2 and 3 until all variables are assigned values for the query.
- 5 Click **OK**.

The query is submitted using the specified variable values.

Selecting Financial Management Member Lists

Member Lists are predefined Financial Management variables for frequently changing information.

► To use a Financial Management Member List in a Dimension Browser member selection:

- 1 Right-click a dimension member in the Dimension Browser, and select **Member List**.

The Choose Member List dialog box is displayed.

- 2 Select a predefined member list from **Choose Member List**.
- 3 Click **OK**.

Selecting Substitution Variables

Substitution variables are predefined Essbase variables for frequently changing information.

Substitution variables simplify document maintenance by enabling fluctuating values to be adjusted centrally (in Essbase), and enabling documents to reference the changing value dynamically.

► To use a substitution variable in Dimension Browser member selection:

- 1 Right-click a dimension member in the Dimension Browser, and select **Substitution Variable**.

The Substitution Variable dialog box is displayed.

- 2 Select a substitution variable from the list of Essbase substitution variables.
- 3 Click **OK**.

Multiple Substitution Variables

Multiple substitution variables can be used using Subset Member Selections.

Tips on Syntax

Substitution variables have their own rules and syntax requirements:

- The substituted value should be a dimension or a member name, and member values should come from the corresponding dimension.
- Do not use the ampersand (&) as the first character of a member name.

Analysis Tools and Substitution Variables

When member selections defined by substitution variables are used in analysis tool definitions, the system resolves the substitution variable to its current value. This ensures accurate aggregations, comparisons, and calculations regardless of the substitution variable definition.

Creating and Selecting Personal Variables

Personal variables simplify complex member selections. After being defined, you can leverage personal variables when you are presented with the corresponding dimension and database connection. Personal variables are containers for an ad hoc collections of otherwise unrelated dimension members.

Defining a personal variable does not include the personal variable in a query. You must select the personal variable from the Dimension Browser when defining the query.

➤ To create a personal variable:

- 1 Select **File**, then **Preferences**.

The User Preferences dialog box is displayed, with the active user or group displayed in the Active Preferences list.

- 2 Click the **Databases** tab to make it current.

- 3 Select a database connection name, and click **Edit**.

The Database Preferences dialog box is displayed.

- 4 Click **Connect**.

The Personal Variable and Point of View tabs are enabled.

5 Click Personal Variable.

The Personal Variable tab lists all currently defined personal variables for the database connection.

6 Click Add.

The Personal Variable dialog box is displayed.

7 Enter a name for the personal variable in Name.

8 Select a dimension from the data source from the Dimension list.

The Dimension Browser for the selected dimension is displayed.

9 Select the dimension members to be included in the personal variable.

All conventional Dimension Browser methods and options are supported.

10 Click OK.

The Personal Variable tab is displayed and the personal variable definition is listed.

Whenever the database connection and dimension is used, the personal variable definition is displayed as a selection option in the Dimension Browser Browse panel.

- To use a personal variable in a query, select the personal variable definition from the Dimension Browser **Browse** panel.

Creating and Applying Points of View

POV database preferences enable you to insert dimensions and members that are of interest to you into the documents of others. POV definitions must be defined and activated by database connection.

When a POV is activated, the Use Point of View option in Data Layout and the wizard are enabled. All subsequently created and loaded documents use the specified POV until it is deactivated. You can also deactivate use of POV by deselecting the Data Layout Use Point of View option as needed.

POV definitions consist of axes and dimension member selections. The definition is used when documents are created with the activated POV.

When you apply a POV definition to a document, only the dimension member selections are applied. This prevents points of view from automatically arranging non-functioning layouts (such as moving all dimensions to one axis).

If all POV member selections are custom filters, you may not see obvious changes to your document. You can check to see which POV is applied on the View Pane Information Panel tab, Point of View segment.

Using a POV definition is a three part process. First, you must create a POV definition. Next, you must activate the POV definition. Lastly, you must set a document to use the activated POV definition, or create a document that uses it.

➤ To create a POV and activate it:

1 Select File, then Preferences.

The User Preferences dialog box is displayed, with the active user or group displayed in the Active Preferences list.

2 Click Databases.

3 Select a database connection name, and click Edit.

The Database Preferences dialog box is displayed.

4 Click Connect.

The Personal Variable and Point of View tabs are enabled.

5 Click Point of View.

The Point of View tab lists all currently defined POV definitions for the database connection.

6 Click Add.

The Point of View dialog box is displayed.

7 Enter a name for the POV in Name.

Use the Data Layout interface to locate dimensions from this data source on axes and make member selections.

8 Define the POV layout, selections, and analysis tools as you would for a query.

9 Click OK.

The Point of View tab is displayed and the definition is listed.

10 To activate this POV definition, select the POV name and click Activate.

11 Click OK.

Whenever the database connection is used, you can apply the activated POV definition in lieu of defining its member selections.

➤ To apply an activated POV definition to an open document:

1 Display Data Layout:

- Click the Navigate toolbar button.
- Select View, then Data Layout.

Data Layout is displayed for the current document.

2 From the Option button list, select User Point of View.

3 Click OK.

The activated point of definition is applied to the current document. You must refresh the content area to display POV selections.

4 To refresh the document, perform one:

- Right-click the content tab for the current document and select Refresh.
- Select View, then Refresh.

- Press F5.
- Right-click the data object and select **Refresh Data**.

Activated POV selections are applied to the current document.

User POV

User POV enables users to select members in Filters, Pages, Rows, and Columns (Data layout and/or member selection controls) and apply them to multiple Web Analysis documents.

This is exposed through the current POV functionality, where User POV is the name of another POV that is created and utilized in Web Analysis documents. The User POV exist for all database connections and can be set at user level only.

► To set a User POV:

- 1 Right click a spreadsheet and select **Save Selection as User POV** to save the dimension member selections to the User POV.

This feature is available in Web Analysis Studio and EPM Workspace.

- 2 Select **Web Analysis User Preferences**, then **OLAP Server**, then select **Save Filters only for User POV**.

All Subscription controls have the “Save Selection as a User POV” option. A selection is saved as a filter to the User POV.

If a Subscription control points to multiple `ReportDataSrcs`, all database connections have their User points of view set for the dimensions of the active control.

► To enable a User POV, in **Data Layout**, select **Use User POV**

Enabling this item adds a member selection option to the Dim Browser for every dimension in the `ReportDataSrc`. Selected member(s) in the User POV are utilized in the spreadsheet query.

Defining Dynamic Time Series Selections

You can select Dynamic Time Series (DTS) definitions for query selection statements.

DTS definitions must be created in Essbase before you can make DTS selections. You select the DTS definition and a corresponding Time dimension member that defines a time period.

You can select DTS substitution variables.

Substitution variables are predefined placeholders for information that changes frequently. Each substitution variable is identified by a variable name and has a temporary value defining its data type. When the substitution variable is used, the temporary value is replaced by a current value. For substitution variables to be used, they must be stored at the database level in Essbase.

► To define a DTS selection:

- 1 Right-click a Time dimension member in the Dimension Browser, and select **Dynamic Time Series**.

Available DTS definitions are displayed in a drop-down list.

2 Select a DTS definition.

The Dynamic Time Series dialog box is displayed.

3 Perform one:

- Select the **Substitution Variable** tab and select a substitution variable from the list.
- Select the **Member** tab and select a dimension member representing the specified date in the "X-to-date" definition.

4 Click OK.

Defining Previous Member Selections

Selecting Also Select Previous selects a specified number of previous members at one dimension level.

➤ To define a previous member selection:

1 In the Dimension Browser, right-click a dimension member, and select Also Select Previous.

The Also Select Previous dialog box is displayed.

2 Specify the number of previous members to retrieve, using the list.

3 Click OK.

The Dimension Browser is redisplayed. The member that you right-clicked is displayed in the Selections list with the Also Select Previous icon.

Selecting Attributes

Essbase can store dimension member names, locations, relationships, and characteristics of members.

Example: The product dimension may indicate that in Women's Apparel, Shirts and Blouses, there is a cotton T-shirt product. An attribute indicates whether each cotton T-shirt is red, cyan, lime, or pink.

Example: The Market dimension may indicate that there is a franchise store in Biloxi, Mississippi. An attribute indicates that the store is 2,500 square feet.

Attributes are stored in the same manner as dimension members. Attribute dimensions are displayed beside the conventional dimensions that they modify in Data Layout. It is important to note that attribute dimensions are labeled and function differently though.

To include attribute dimensions in the query, you must select the attribute dimension itself.

To select conventional dimension members using attributes, you must select the conventional dimension, and use the Select Attribute advanced member selection method.

► To select dimension members by their attributes:

- 1 Right-click a dimension member in the Dimension Browser, and select **Select Attribute**.
- 2 Select an attribute dimension from the **Select Attribute** sub menu.

The Select Attribute dialog box is displayed for the selected attribute dimension.

- 3 Select a dimension member attribute from the Select Attribute frame.
- 4 Click **OK**.

Turning Off Key Figure Attributes

► To turn off a key figure attribute:

- 1 Right-click the attribute on the Analyze interface.
- 2 Select **Data Display**, then **Suppress Currency and Units**

Note: This feature can be applied for all other characteristics too.

Creating Calculated and Restricted Key Figures

► To create or edit key figures:

- 1 Select **Analysis Tools** then, **Calculated Key Figures**
- 2 In **Calculated Key Figures**, select **New** or a key figure.
- 3 If creating a key figure, replace Untitled with a unique name.
- 4 Select a Function and related information.

Note: Information requested differs depending on the function selected.

| Function | Measure | Cube Hierarchy |
|----------|---------|----------------|
| Avg | x | x |
| Var | x | x |
| Max | x | x |
| Median | x | x |
| Min | x | x |
| Sum | x | x |
| Count | | x |

Note: In the Selections box, you can only add members from the same hierarchy of a dimension

5 In **Cube Hierarchy**, double-click an entry to move it to **Selections**.

Caution! Only one hierarchy can be used. If you attempt to select another hierarchy, Web Analysis asks if you want to remove all selections made on the other hierarchy.

6 Click **OK** to close **Calculated Key Figures**

7 In **Key Figures Browser**, select a key figure to move it to **Selections** and click **OK**.

7

Navigating Documents

In This Chapter

| | |
|--|----|
| Navigating Data Objects and Data Sources | 81 |
| Navigation Methods | 82 |

Navigating Data Objects and Data Sources

Web Analysis documents contain a variety of non-static data objects:

- Spreadsheets
- Charts
- Pinboards
- SQL Spreadsheets
- Freeform Grids

You can rearrange, expand, change and concentrate dimension intersections; these are called navigation methods because they enable travel through dimensional hierarchies.

Navigation methods vary for data objects and data sources:

Table 1 Web Analysis Studio Supported Data Sources

| Type | Data Source |
|-------------------|---|
| OLAP | Essbase IBM DB2 OLAP Server SAP BW |
| Oracle Hyperion | Financial Management Oracle Hyperion Planning, Fusion Edition |
| Relational | IBM DB2 Enterprise Server Edition Microsoft SQL Server Oracle Teradata Other JDBC RDBMS |

OLAP data sources support all navigation methods described in this chapter. Other Oracle | Hyperion data sources and relational data sources support fewer navigation methods.

Navigation Methods

Web Analysis Studio navigation methods include:

| Navigation | Description | Method |
|--------------------------------|--|--|
| Swapping and Moving Dimensions | Swap—Switches the placement of two dimensions. Move—Relocates a dimension on document axes. | Swap—Drag a dimension onto another dimension. Move—Drag a dimension from one position to another position. |
| Paging | Maintains the dimensions on the row and column axes, while changing their intersection with dimensions that differ on the Page axis. | Click or scroll the Page Control panel. |
| Keep Only | Deselects all other dimension member selections for the selected Dimension, leaving only the selected member. | Right-click a dimension member header, and select Keep Only from the shortcut menu. |
| Remove Only | Deselects the selected member, removing it from the query result set. | Right-click a dimension member header, and select Remove Only from the shortcut menu. |
| Drilling | Increases or decreases the level of dimension detail by including or excluding members of the dimensional hierarchy in the display. | Double-click dimension member headers. You can customize the drilling behavior. |
| Drill Linking | Navigates to other documents or executables. | Click the linked cell to pass the selected cell and the dimension context to another document or data object. |
| Dragging | Uses the Information panel to rearrange the data object in the content area. | Drag objects on the Information panel. |
| Undo and Redo | Undo reverses the last executed command, and returns the display to its previous state. Redo reverses the negation of the last command. | Select Edit , then Undo . You can select to undo the last ten executed commands. Select Edit , then Redo . You can select to redo the last ten executed commands. |
| Custom Controls | You can define document navigation using controls in custom documents. | Drag a component onto a custom document, and associate a data source or behavior with it. See “Creating Subscription Controls” on page 226 . |

It is important to differentiate these navigation methods:

- **Drilling**—Conventional drilling navigates to related dimension members.
- **Linking** (also called drill-linking)—Drill linking passes the selected member to other documents.
- **Linked Reporting Objects (LROs)**—LROs open executables to display cell-notes, Windows executables, or Web page URLs.

Swapping and Moving Dimensions

You can rearrange intersections by swapping and moving dimensions:

- Swapping switches two dimensions, replacing one with the other.
- Moving relocates a dimension.

Swapping and moving are nearly identical in their use of interface drag methods. They differ in where the dimension is dropped. To swap, drop the dimension on another dimension label. To move, drop the dimension between dimension labels.

➤ To swap dimensions:

- 1 Click and hold a dimension member.
- 2 Drag the dimension member on to another dimension member.

The two dimensions exchange places.

➤ To move a dimension:

- 1 Click and hold a dimension member.
- 2 Drag the dimension member to a point between other dimension members and release the mouse button when a bold rule is displayed.

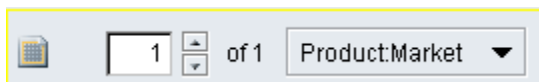
The dimension is relocated to where the rule displayed.

Document creators can lock the ability to swap and move dimensions using Properties.

Paging

Paging maintains the dimensions on the row and column axes, while changing their intersection with dimensions that differ on the Page axis.

You can jump or scroll through pages of intersections using the Page Control panel.



The Page Control panel organizes Page axis intersections so that each page is relevant to a Page dimension member.

➤ To navigate the Page dimension, perform one action:

- Click the **Page Control** scroll buttons to move in the page series.
- Enter a page number for the page series and press **Enter**.
- From the list, select a page dimension member.

Pages

The Page axis is another axis for organizing dimensions. It is sometimes helpful to think of it as the Z axis of a three-dimensional graph.

Visualize a stack of spreadsheets. Traveling back and forth in the stack enables comparison of values on different pages.

If spreadsheets in the stack must be relevant to Page axis dimensions, each page must represent a Page axis dimension member or dimension member combination.

Multiple and Single Drop-Down Lists

The Page Control panel can display multiple page drop-down lists when you work with page dimension combinations. Multiple-page drop-down lists display all possible page combinations, whether data exists. Single-page drop-down lists omit page combinations that do not contain data. Oracle | Hyperion recommends using one page drop-down list when working with sparsely populated dimensions.

- To separate Page dimensions into multiple drop-down lists, click the Page Control panel Page icon.
- To combine multiple page dimensions into one drop-down list, click the Page icon.

Keep Only

Keep Only deselects all other dimension member selections for the selected Dimension, leaving only the selected member.

- To deselect all but one dimension member, right-click the dimension member header, and select **Keep Only** from the shortcut menu.

Remove Only

Remove Only deselects a dimension member, removing it from the query result set.

- To remove one dimension member from the query result set, right-click a dimension member header, and select **Remove Only** from the shortcut menu.

Drilling

Drilling increases or decreases the level of document detail by changing the display of dimension members. Because drilling is customizable, the term drilling can mean almost hierarchical navigation prompted by double-clicking a dimension label.

You can customize drilling using three options:

- Drilling options specify the drilling result set.
- Expand on Drill specifies whether the drilling result set replaces or augments the currently displayed dimension members.
- The Selected Member data display option specifies whether the drilled member is included in the drilling result set.

Drilling Options

Web Analysis Studio features these default drilling behaviors:

- **Drill Down**—Includes member's children .
- **Drill Up**—Includes member's parents.
- **Drill to Top**—Includes highest ancestor

You can customize drilling by setting drilling options. Drilling options are set for the current document through the data object shortcut menu (Drill / Drill Options). Drilling options can also be set for all subsequently created documents through Drilling preferences.

| Drilling Option | Description |
|--------------------------|--|
| Drill to Next Level | Includes children of drilled member. |
| Drill to Descendants | Includes all descendants of drilled member. |
| Drill to Dim Bottom | Includes a list of members on the bottom level of hierarchy without Selected member. The member is replaced with a list of members on the bottom level. |
| Drill to Siblings | Includes members at one level who share a parent with the drilled member |
| Drill to Same Level | Includes all members on drilled member's level. Note: Oracle Hyperion defines levels as hierarchical layers counted from the lowest descendant (Level 0); other data sources define levels differently. Asymmetric hierarchies may also yield unexpected results |
| Drill to Same Generation | Includes all members on drilled member's generation Note: Oracle Hyperion defines generations as hierarchical layers counted down from the highest ancestor (Generation 0); other data sources define generations differently |

Drilling options are data-source specific. Drilling options that are not supported by the data source default to Drill to Next Level.

Expand on Drill

The Expand on Drill drilling option sets the drilling return set to augment or replace currently displayed dimension members. You can set Expand on Drill for the current document through the data object shortcut menu (Drill / Drill Options). Expand on Drill can also be set for all subsequently created documents through Drilling preferences.

When Expand on Drill is selected the drilling return set is added to currently displayed dimension members. When Expand on drill is disabled the drilling return set replaces currently displayed dimension members.

Selected Member Data Display Option

The Selected Member data display option specifies that the query result set should include the member from which advanced member selections are defined.

For example: If you specify Also Select Children on the Year dimension member and Selected Member is enabled, Year and all of its children are returned by the query. When Selected Member is disabled, only the children of year are returned.

This Selected Member functionality also impacts the drilling result set, by including or excluding the drilled member in the drilling result set.

Additionally, you can enable the Selected Member First data display option, to ensure that the drilled member is listed above the drilling result set.

Drilling Variations

These data display and drilling option combinations result in drilling return sets that differ. If you are aware of this dynamic you are better prepared to receive the intended drilling return set.

| Drilling Variation | Description |
|---|---|
| Drilling down with Expand Drilling enabled and Data Display / Selected Members disabled | Augments current member selections with the drilled return set and removes the drilled member. |
| Drilling down with Expand Drilling enabled and Data Display / Selected Members enabled | Augments current member selections with the drilled return set and includes the drilled member. |
| Drilling down with Expand Drilling disabled and Data Display / Selected Members disabled | Replaces the current member selections with the drilled return set and removes the drilled member. |
| Drilling down with Expand Drilling disabled and Data Display / Selected Members enabled | Replaces the current member selections with the drilled return set and includes the drilled member. |

Drill Linking

Drill linking enables you to navigate to other documents by double-clicking cells with replaced links.

It is important to distinguish drilling from drill linking. Drilling navigates along the lines of the dimensional hierarchy. Linking passes the current member selection to other documents and executables.

Linking differs from LROs in that linking passes the current member selection. LROs are linked to cell notes, file attachments, and URLs.

- To access the Drill Link Options dialog box, right-click and select **Drill**, then **Drill Link Options**.

| Drill Linking Option | Description |
|-----------------------------|---|
| Link From | Indicates the dimensions, attributes, and data on which links can be set. |
| Link To | Indicates the destination document of the link. |
| Add | Displays the Open dialog box to select the link destination. |
| Remove | Removes the link and restores conventional drill navigation. |
| Bottom | Executes linking only at the lowest dimension level. |
| Pass Pages | Passes the Page context to the link destination. |
| Pass Filters | Passes the Filter context to the link destination. |

Defining Drill Links

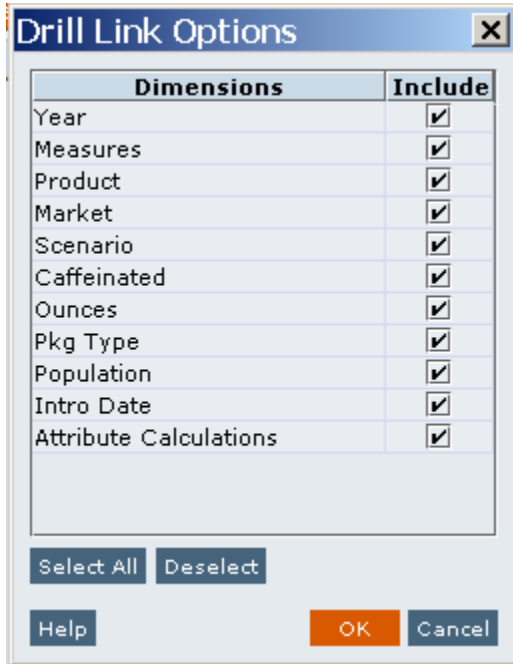
- To define a drill link:
 - 1 Right-click the data object and select **Drill**, then **Drill Link Options**.**

The Drill Link Options dialog is displayed.
 - 2 Click the ellipses (...)** (in the Add column) for the dimension on which to place the drill link.

The Select a Document dialog is displayed.
 - 3 Click the document to be displayed, then click **OK**.** You are returned to the Drill Link Options dialog.
 - 4 Select options in the Bottom, Pages, and Filters columns as needed.**

The Bottom option indicates that the drill link is executed only at the lowest level of the specified dimension. The Pages option passes the Page axis context to the document. The Filter option passes the Filter axis context to the document.
 - 5 If you selected the Filters option, the Advanced column is enabled .Click the Advanced ellipses (...)** to open the Drill Links Options dialog where all the dimensions with corresponding checkboxes are listed.You can select/deselect filter dimensions for the specific dimension that has a drill link report





defined, or, click the **Select All** or **Deselect All** buttons to select or deselect all dimensions respectively.



6 Click **OK**.

Dragging

You can drag or move dimension member labels between Information panel axis segments:

| Icon | Axis Segment |
|---|--------------|
|  | Columns |
|  | Rows |
|  | Pages |
|  | Filters |

► To move a dimension using the Information panel:


- 1 Select the **View Pane Information Panel** tab.
- 2 Click an axis segment icon to expand the segment.
- 3 Click and hold dimension member.
- 4 Drag the dimension member between axes or other dimension members and release the mouse button.


The dimension is relocated.

Note: The requirement to have at least one row dimension and one column dimension, may prevent you from dragging dimensions that leave an axis empty. In this case, use Data Layout to rearrange the dimension layout.

Undo and Redo

An index containing the last 10 executed commands is cached on each client. The Undo command reverses the most recent command. The Redo command repeats the last command.

- To undo the last command, perform one action:
 - Select **Edit**, then **Undo**.
 - Click .

- To reinstate the last command,
 - Select **Edit**, then **Redo**.
 - Click .

- To undo or redo one of the previous 10 commands, perform these actions:
 - 1 Select the undo or redo list from the corresponding toolbar button.
 - 2 Select a command from the index.

All commands through that point in the index are undone or redone, as selected.



Formatting Documents

In This Chapter

| | |
|---|-----|
| Formatting Options..... | 91 |
| Other Kinds of Formatting..... | 92 |
| Formatting Order of Precedence..... | 92 |
| Data Display Options..... | 93 |
| Formatting Dialog Box..... | 96 |
| Cell Formatting..... | 99 |
| Sizing Columns..... | 100 |
| Changing and Locking Display Types..... | 101 |
| Spreadsheet Options..... | 101 |
| Charts and Chart Types..... | 102 |
| Chart Properties..... | 103 |
| Selecting Color..... | 110 |
| Font Properties..... | 110 |
| Selecting Graphics..... | 111 |

Formatting Options

Documents display data values returned from the data source in a data object. Multiple data objects can occupy a document, and each data object's display type can differ:

- Spreadsheet
- Chart
- Pinboard
- SQL Spreadsheet
- Free-form grid

Each display type has formatting options. This chapter describes the formatting options for spreadsheets and charts, as only these two objects can be modified through EPM Workspace.

Related Topics

[“Pinboards” on page 185](#)

[“Creating SQL Spreadsheets” on page 194](#)

Other Kinds of Formatting

- **Display Type**—Converts spreadsheet data objects to charts or pinboards.
- **Data Display options**—Sets document behavior through the data object shortcut menu (or preferences, for subsequently created documents).
- **Formatting options**—Formats dimension headers and cell ranges. You can restrict formatting by member selection or cell value. Formatting options include currency formatting and positive and negative numeric formatting. See [“Formatting Dialog Box” on page 96](#). Formatting options include:
 - Measures formatting (Available in Web Analysis Studio only)
 - Default formatting preferences
 - Ad hoc formatting
 - Data formatting analysis tool
 - Cell FormattingSee [“Formatting Data” on page 98](#).

The scope of formatting depends on its source. To review all formatting definitions applied to a document, you must consult preferences, the Analysis Tools Manager, the Information Panel, and various document, data object, dimension and cell property settings.

Formatting Order of Precedence

The formatting order of precedence can be changed for Database Connection Measures formatting, User Preferences, and Analysis Tools formatting. For example, Analysis Tools formatting can be set override all DB Connection and User Preferences formatting for a specific report. Formatting is applied an order of precedence:

1. **Measures formatting** — Applied globally to dimensions on database connections. Settings are saved with the database connection. See [“Creating OLAP and Oracle | Hyperion Database Connections” on page 158](#).
2. **Default formatting preferences** — Applied globally to column and row headers, and data values. Settings are saved in preference files. See [“Default Formatting Preferences” on page 261](#).
3. **Formatting** — Applied ad hoc from the data object shortcut menu on dimension members. It is stored with the document definition and applied as a preliminary Analysis Tool definition. See [“Formatting Dialog Box” on page 96](#).
4. **Data formatting analysis tool** — Applied after Data Formatting Analysis Tool definitions are created and applied. It is stored with the document and applied from the Analysis Tools Manager. See [“Data Formatting” on page 125](#).

5. **Cell formatting** — Applied ad hoc to cell ranges, and is stored with the document. See [“Formatting Data” on page 98](#).

Preferences and formatting options:

There are some identical formatting options and preferences. Preferences are global settings applied to documents. Preferences, however, can be overridden by database connection formatting and document-based formatting.

The formatting order of precedence can be changed for Database Connection Measures formatting, User Preferences, and Analysis Tools formatting. For example, Analysis Tools formatting can be set to override all Database Connection and User Preferences formatting for a specific report.

Order of formatting precedence:

1. Formatting options saved with documents
2. Formatting options saved with the database connection
3. Formatting options specified by the User Preferences dialog box

Data Display Options

Each display type has data display options specifying document behavior:

- **Label mode**—Essbase and Financial Management enable administrators to define multiple alias tables. Web Analysis Studio enables you to specify which alias table to use. Alias table selection is saved as a database connection property. See [“Setting the Label Mode” on page 94](#).
- **Dimension header sort**—Order column and row headers in a query result set using Dimension Header Sort definitions. Dimension Header Sort options are determined by the data source. See [“Sorting Dimension Headers” on page 95](#).
- **Suppression**—Suppresses rows with missing data, rows with zeroes, and in the case of Essbase, rows with shared members. Suppression can be set from the Data Layout dialog box, Data Display shortcut menu or OLAP Server preferences.

| Data Display Option | Description |
|-----------------------|---|
| Selected Member | Displays the explicit member selection made in the query. This member selection can be previewed in the Information panel, or Dimension Browser. Selected Member provides a method for displaying this information in data objects. |
| Selected Member First | When Selected Member is active, enables you to position the explicit member selection made in the query definition first (from left to right, or top to bottom). |
| Default Label Mode | Toggles between label modes: <ul style="list-style-type: none"> ○ Descriptions ○ IDs ○ Both (Financial Management option) |

| Data Display Option | Description |
|---|--|
| Dimension-Specific Label Mode | Toggles between label mode options: <ul style="list-style-type: none"> ○ Use Default ○ Descriptions ○ IDs ○ Both (Financial Management option) |
| Display Entity Currency | When using Financial Management data sources with defined Entity dimension currency information, you can enable the Display Entity Currency option to append Entity dimension members with currency value. This can be set before querying using Data Layout options, after querying using the Data Display shortcut menu, and for all subsequently created documents using OLAP Server preferences. See “Financial Management” on page 168 . |
| Dimension Header Sort | Orders the selected dimension per the order option: <ul style="list-style-type: none"> ○ Default ○ Ascending ○ Descending ○ Level (OLAP specific) ○ Generation (OLAP specific) ○ Selection Order (Relational specific) <p>The Default option is the order in which dimension members are naturally ordered by data source outlines. Using this option may offer improved performance.</p> <p>For a complete description, See “Sorting Dimension Headers” on page 95.</p> |
| Show Linked Reporting Object Indicators | Shows or hides small cell triangles indicating the presence of Linked Reporting Objects. Triangles persist for related content. |
| Suppress | Omits data, as specified, from the query result set: <ul style="list-style-type: none"> ○ Missing Rows ○ Missing Columns ○ Shared Members ○ Zero Rows |

Setting the Label Mode

Alias tables are database tables storing alternate description labels for dimension members.

Essbase and Financial Management enable administrators to define multiple alias tables. Web Analysis Studio enables you to specify which alias table to use. The alias table selection is saved as a database connection property. See [“Alias Tables” on page 263](#).

You can specify to display the member ID or its description label from the alias table.

- The ID number is a column of unique values distinguishing members from all other members.

- Description displays the alias table description. Web Analysis Studio uses the Description label when no label mode is specified.

Financial Management users have an additional label mode option. They can select the Both option to display the ID label and description.

You can set the default label mode before querying using Data Layout options or the last step in the document creation wizard, and after querying using the data object shortcut menu. You can specify which description label to use in dimensions, using Dimension Browser and the data object shortcut menu.

The Description label comes from the alias table setting, saved per database connection and per active user as a database user preference.

➤ To set the default label mode for the current database connection:

- 1 Right-click dimension header.
- 2 Right-click and select **Data Display**.
- 3 Select **Default Label Mode** from the drop-down list.
- 4 Select **IDs** or **Descriptions**.

➤ To set the label mode for a dimension:

- 1 Right-click a dimension header.
- 2 Right-click and select **Data Display**.
- 3 Select the dimension-specific Label Mode from the drop-down list.
- 4 Select **Use Default, IDs** or **Descriptions**.

Default label mode coordinates the label mode of the selected dimension with all other dimensions displaying the default label mode. Default label mode can be set for all dimensions in a query through Data Layout, and per dimension by Dimension Browser or the Data Display shortcut menu.

Sorting Dimension Headers

You can order column and row headers in a query result set using Dimension Header Sort definitions. Dimension Header Sort options are determined by the data source.

For Example, Essbase enables you to order columns and rows in default, ascending, descending, level or generation order. The default order is the natural order in which dimension members are returned, based on the data source outline.

➤ To indicate a Dimension Header Sort definition:

- 1 Right-click a dimension member header and select **Data Display**, then **Dimension Header Sort**.

The Dimension Header Sort submenu is displayed.

- 2 Select **Default, Ascending, Descending, Level** or **Generation**.

Relational Dimension Header Sort

You can order the result set returned by relational SQL queries in Ascending, Descending, Selection Order or Default order. Default returns members based on the data source outline. Selection Order is the member selection order in Dimension Browser.

Unlike OLAP servers, relational cubes are compiled by Web Analysis Studio, and the label mode, alias tables, and selection order are manually coordinated. Sort by alias may perform comparatively slow, as the default query result set is sorted by ID. Sorting by alias requires a complete client-side re-sort.

The source of the relational dimension header sort impacts performance. Defining a relational dimension header sort using Data Layout, prompts Web Analysis Studio to sort all dimensions as part of the current query result set.

Alternatively, sorting a relational dimension using the data object shortcut menu (Data Display / Dimension Header Sort) requires you to select dimension headers.

Lastly, you can apply dimension header sort definitions to relational generations defined in the Generation Editor. These definitions only impact the Dimension Browser sort order. Using the Order By Mode drop-down list, you can also specify orders by ID or Alias.

Formatting Dialog Box

The Formatting dialog box indicates the members to which these formats are applied:

- Header font properties by member.
- Data value format and font properties by member.
- Edit the dimension members selected for formatting.
- Restore default formatting preferences.

| Control | Description |
|----------------------|--|
| Selections | Lists dimensions and members in the query. The dimensions that appear are based on the context of where the Formatting dialog box was invoked. For example, if Formatting is invoked from the rows, all row dimension and members are displayed. If Formatting is invoked from a cell, all dimensions and members in the query are listed. |
| Advanced | Shows the Dimension panel that enables you to select or deselect dimensions and apply formatting to specific dimension combinations. This mainly applies when there are two or more dimensions in the columns or rows. |
| Dynamic References | Provides selection of row or column references instead of selecting members from a report. Formatting is applied regardless of the member selection. |
| Apply to entire grid | Applies formatting defined to the entire spreadsheet query. When selected, the Selections section is grayed and a Formatting "All Members" item is added to the Analysis Tools Manager. |
| Header Font tab | Allows formatting of member labels fonts in the row and column headers. |
| Data Font tab | Allows formatting of data cells fonts. Conditional font or number formatting can be applied to specific data values that meet the defined criteria. |

| Control | Description |
|--|---|
| Data Format tab | Provides formatting to specific data values such as currency/prefix/suffix, as well as other numeric formatting. Conditional font or number formatting can be applied to specific data values that meet the defined criteria. |
| Conditional Formatting | Enables conditional formatting of dimension member selections based on the criteria defined in the operand drop-down list and value text box. |
| Conditional Formatting – Operand drop-down list | Specifies the conditional formatting operand: >, >=, =, <=, <, or <>. |
| Conditional Formatting – Value Text box | Specifies the conditional formatting value. |
| Restore Defaults | Restores the settings specified by the Default Formatting preferences. |

Formatting Behavior

The behavior for the members that are selected prior to opening the Formatting dialog:

- When you right-click a column or row header and select Formatting, the context is completed automatically for the row or column member selections. This context can be edited and different member selections can be made.
- When you right-click a cell and select Cell Formatting, the context is completed for the cell intersection of members. This context cannot be edited.
- When you right-click a column or row header and select **Analysis Tools**, then **Format**, the Formatting dialog is opened without completed context.
- If the number of members in a dimension on a report exceeds 25, the dimension parent node is collapsed. You can click the node to expand it.
- If there is more than one dimension in the rows or columns, you can select from one dimension only or multiple dimensions.

Using Dynamic References

Instead of selecting members from a report, you can use Dynamic References to select a row or column reference. Formatting is applied regardless of the member selection. Also:

- If a member is drilled on, its formatting will “carry with it”.
- If a swap or pivot is performed, the formatting will “carry” where possible.

Topics that discuss formatting:

- [“Creating Formatting Definitions” on page 98](#)
- [“Formatting Data” on page 98](#)

Creating Formatting Definitions

► To create formatting definitions:

1 **Right-click a column or row dimension header.**

2 **Select **Formatting**.**

The **Formatting** dialog box is displayed.

3 **Optional. To display the Dimensions panel, click **Advanced**.**

4 **To select a dimension, click its check box.**

If you select one dimension from the Dimensions panel, the corresponding dimension members are displayed in the Combinations panel.

If you select multiple dimensions from the Dimensions panel, the Combinations panel displays dimension member aggregations.

5 **To specify dimension members, click the check boxes in the **Combinations** panel.**

6 **To specify a formatting definition, perform an action:**

- To specify header cell font properties for the dimension member selection, click the **Header Font** tab.
- To specify data cell font properties for the dimension member selection, click the **Data Font** tab.
- To specify leading and trailing text and numeric formatting, click the **Data Format** tab. See [“Formatting Data” on page 98](#).

Note: The Data Font and Data Format tabs provide conditional formatting where you can refine formatting definitions. Select **Conditional Formatting**, then select an operand and specify a value.

7 **Click **OK** to accept the formatting definition properties for the dimension member selection.**

The formatting definition is listed in Analysis Tools Manager for future reference, and the definition is applied to the document.

Formatting Data

You define format definitions in the Data Format tab:

Note: For behavior when formatting Date and Text Measures cells, see [“Date and Text Cell Behavior” on page 50](#).

| Formatting Options | Description |
|------------------------|---|
| Conditional Formatting | Enables conditional formatting of dimension member selections based on the criteria defined in the operand drop-down list and value text box. |

| Formatting Options | Description |
|--|--|
| Replace Missing With | Enables you to replace missing data with zeros or text that you specify. |
| Leading and Trailing Formatting | |
| Currency Symbol | Inserts currency formatting symbols into the Positive Prefix and Negative Prefix text boxes. |
| Positive Prefix | Specifies the character to precede positive numeric values. |
| Positive Suffix | Specifies the character to follow positive numeric values. |
| Negative Prefix | Specifies the character to precede negative numeric values. Caution: The minus sign (-) is the default prefix. Deleting the default prefix without replacing it displays negative values as positive. |
| Negative Suffix | Specifies the character to follow negative numeric values. |
| Numeric Formatting | |
| Grouped Thousands | Displays numeric digits as grouped by thousands. |
| Minimum Decimals | Indicates the minimum number of decimal places displayed. |
| Maximum Decimals | Indicates the maximum number of decimal places displayed. |
| Scale | Enables abbreviated values by tens, hundreds, thousands, ten-thousands, hundred-thousands, millions, and billions. |
| Use Negative Color | Indicates that negative numbers are signified by a selected color. |
| Select Negative Color | Enables you to select the color representing negative values. |
| Date Formatting | Select a date format. |
| Samples | |
| Update Samples | Updates the samples panel based on the most recent formatting selections. |

Cell Formatting

The Cell Formatting dialog box enables you to format cell ranges ad hoc.

- Format data value font properties for cell ranges.
- Set text and numeric formatting for cell ranges.
- Restore default formatting preferences.

To define cell formatting, right-click a spreadsheet cell and select Cell Formatting:

| Controls | Description |
|------------|---|
| Selections | Displays the cell dimension member selection statement. |

| Controls | Description |
|------------------|--|
| Data Font tab | Enables you to select font properties for the cell. |
| Data Format tab | Enables you to specify text and numeric formatting. |
| Restore Defaults | Restores the settings specified by the Default Formatting preferences. |

Sizing Columns

Columns can be individually sized, uniformly sized, or reset to their default column width.

The Freeze Headers formatting option must be enabled in the preferences or the Spreadsheet Options dialog box before you can size columns.

Sizing Individual Columns

► To size a column:

- Right-click a column header and select **Column Sizing**, then **Custom Width** from the shortcut menu. When the Column Width dialog box is displayed, enter the desired column width in pixels. The default is 75 pixels.

Sizing All Columns to a Common Width

► To size all columns uniformly:

1 To size one column:

- Position your mouse over the border between two column headers. When the cursor changes to the double-arrow cursor, drag the column border to adjust the column width.
- Right-click a column header and select **Column Sizing**, then **Set Column Width** from the shortcut menu. When the Column Width dialog box is displayed, enter the desired column width in pixels.

2 When you are satisfied the selected column size, right-click that column and select **Column Sizing** then, **Set All Columns To This Width**.

The remaining columns are automatically resized to the selected column's width.

Autosizing Column Width

► To size all column widths so that headers display without truncation, select **Column Sizing**, then **Autosize** from the header shortcut menu.

Note: You must save the document before closing it to preserve the column widths.

Changing and Locking Display Types

- To change the current display type, select the **Display** menu, and select a display type or chart type from the submenu.
- To prevent others from changing the current display type:
 - 1 **Right-click the current content tab and select **Properties**.**
The File Properties dialog box is displayed.
 - 2 **Select the **Advanced** tab.**
 - 3 **In **Document Usage**, select **Change Display Type**.**
 - 4 **Click **OK**.**

See [“Modifying Document Properties” on page 31](#).

Spreadsheet Options

All spreadsheet formatting options are set using the Spreadsheet Options dialog box, accessed from the spreadsheet data object shortcut menu. You can set these options for all spreadsheets subsequently created using Spreadsheet preferences.

| Spreadsheet Option | Description |
|--------------------|--|
| Display | |
| Gridlines | Sets the spreadsheet to display table gridlines. |
| Transparent | Makes the cell background transparent to display a spreadsheet background image. |
| Row Banding | Sets spreadsheet rows to display alternating banding. |
| Column Banding | Sets spreadsheet columns to display alternating banding. |
| Background Color | Opens the Select Color dialog box, to set the background color. |
| Background Image | Opens the Select Background Image dialog box. |
| Row Band Color | Opens the Select Color dialog box, to set the color of row banding. |
| Column Band Color | Opens the Select Color dialog box, to set the color of column banding. |
| Headers | |
| Custom Row Height | Sets a fixed height for spreadsheet rows in point size (from 20-200). |
| Freeze Headers | Holds column dimension headers in place as cells scroll independently. Note: Freeze Headers must be enabled for Column Sizing. |
| Row Titles | Displays column headers for nested rows. |

| Spreadsheet Option | Description |
|------------------------------------|--|
| Row Header Alignment | Aligns row headers left, center, or right or indents them based on generation. |
| Indent Amount | Indicates the number of pixels to indent row headers for each level from the top of the dimension hierarchy. |
| Row Group Alignment drop-down list | Aligns rows as a group center, top, or bottom in a cell. |
| Header Font | Displays the Font Properties dialog box, enabling the selection of header fonts and font formatting. |
| Header Background Color | Opens the Select Color dialog box, where you can set the header background color. |
| Sample Header | Displays the current header formatting. |
| Column Header Alignment | Justifies column headers; Center (default), Left or Right. |
| Data | |
| Align Text | Sets the alignment of textual data values: left, center, and right. |
| Align Values | Sets the alignment of numeric data values: left, center, and right. |
| Cell Font | Displays the Font Properties dialog box enabling the selection of data value fonts and font formatting. Note: Font sizes are limited to a maximum of 100 points. |
| Cell Background Color | Opens the Select Color dialog box where you can set the cell background color; does not override banding. |
| Sample Cell | Displays the current data values formatting. |

Charts and Chart Types

Charts are graphic representations of spreadsheet data. Their visual nature expedites quick analysis, color coding, and cues that aid comparisons.

Charts, depending on the chart type, can display one to four dimensions. Pie charts only display one dimension; quadrant charts offer more complex displays.

Charts can be rendered using a variety of chart types:

| Chart Type | Compares |
|-------------------|---|
| Bar | Similar elements, represented as vertical bars. |
| Line | Items over time. |
| Spline | Displays the document as a spline chart. |
| Pie | Contributions. |
| Area | Items over time. |

| Chart Type | Compares |
|----------------|--|
| Curve Area | Items over time, represented as a curved area. |
| Horizontal Bar | Similar elements. |
| Marks | Items over time. |
| Pareto | Trends in data. |
| Box | Displays the document as a box plot chart. |
| Quadrant | Two members from one dimension over time. |
| Bubble | Displays the document as a Bubble chart. |

Only the first 50 dimension members can be accommodated on chart axes.

Pie Charts

Special Features of Pie Charts:

- Wedge separation
- Pie rotation

Drag pie wedges along the radius of the pie. Click and drag to rotate the pie chart. Only 19 multiple pie charts can be displayed simultaneously on the data object.

Quadrant Charts

In Quadrant charts, at least one dimension must be placed on the column axis and at least two dimensions must be placed on the rows axes. Other dimension-axes arrangements result in error messages.

Bubble Charts

Bubble charts require three dimensions. Only one dimension can be placed on the column axis. One or two dimensions can be placed on the row axis. There must be two columns in the dimension positioned on the columns axis. These columns may be the result of selecting two dimension members, or of including a calculated column with a dimension member. The values in the first two columns provide the X and Y values required to plot the chart.

A third column provides the Z value used to determine the bubble size. If no third column is available, a constant of 100 is used to determine the bubble size.

Chart Properties

Use the data object shortcut menu to access Chart Properties, described in these topics:

- [“General Chart Properties” on page 104](#)—Options for effects, object borders, chart backgrounds, and legends.
- [“Titles Chart Properties” on page 105](#)—Options for chart titles.
- [“Axes Chart Properties” on page 105](#)—options for axes, number formatting, gridlines, scale, and labels.
- [“Series Effects Chart Properties” on page 106](#)—Options for chart behavior and border formatting.
- [“Series Chart Properties” on page 107](#)—Options for chart object properties.
- [“Pie Chart Properties” on page 108](#)—Options for pie charts.
- [“Bubble Chart Properties” on page 108](#)—Options for bubble charts.

General Chart Properties

| Control | Description |
|------------------------|---|
| Layout | |
| Chart Type | Enables you to set the Chart Type: Bar, Line, Spline, Pie, Area, Curve Area, Horizontal Bar, Marks, Pareto, Multi, Box, Quadrant, and Bubble. |
| Stacked | Enables you to arrange chart objects: Side-by-Side, Stacked, and Stacked 100%. |
| Left Plot Area Margin | Enables you to specify a left margin for the plot area. |
| Right Plot Area Margin | Enables you to specify a right margin for the plot area. |
| Effects | |
| 3D | Represents chart objects in three-dimensional space. |
| Anti-alias Fonts | Enables and disables the use of anti-alias fonts. Although anti-alias fonts are clearer, they sometimes differ from the original font style. |
| Cluster (Z-axis) | Arranges chart objects along the Z axis in three-dimensional space. |
| Show Z-axis Labels | Displays labels along the Z axis (front to back). This feature is only available when the chart is clustered, and for Bar, Horizontal Bar, Pareto and Multichart chart types. Long Z-axis labels may be cut off by chart margins. |
| Background | |
| Background Color | Displays the Select Color dialog box where you can set the chart background color. |
| Plot Area Color | Displays the Select Color dialog box where you can set the plotter background color. |
| Background Image | Displays the Select Graphic dialog box where you can set the chart background image. |
| Legend | |
| Show Legend | Displays a chart legend. |
| Position | Locates the Legend to the Top, Left, Bottom, or Right of the chart. |

| Control | Description |
|---------|--|
| Color | Displays the Select Color dialog box to set the legend background color. |
| Font | Displays the Font Properties dialog box to select font and their formatting. |

Titles Chart Properties

| Control | Description |
|--------------|--|
| Header Title | Sets the text string for the header title. |
| Footer Title | Sets the text string for the footer title. |
| Left Title | Sets the text string for the left title. |
| Right Title | Sets the text string for the right title. |
| Font | Displays the Font Properties dialog box to select font and their formatting. |

Axes Chart Properties

| Control | Description |
|------------------------|--|
| Axis | Indicates the current axis: <ul style="list-style-type: none"> ● X-axis - Sets the Axes tab to display x-axis parameters. ● Y-axis - Sets the Axes tab to display y-axis parameters. ● Secondary Y-axis - Set the Axes tab to display secondary y-axis parameters. See also Series Tab, Assign to Secondary Y-axis. |
| Show Axis | Displays the current axis. |
| Scale | |
| Auto-calculate | Enables the current axis to be calculated automatically based on data values. |
| Start at Minimum Value | Indicates whether to start numeric labels with the minimum value. |
| Minimum | Sets the minimum value on the current axis. |
| Maximum | Sets the maximum value on the current axis. |
| Step | Sets the number of increments to scale on the current axis. |
| Scale | Enables you to indicate the multiple by which to scale the current axis: None, Tens, Hundreds, Thousands, Ten Thousands, Hundred Thousands, Millions, or Billions. |
| Gridlines | |
| Show Gridlines | Displays gridlines on the current axis. |

| Control | Description |
|----------------------|---|
| Style | Represents gridlines using one style: Solid Line, Dash, Dot, and Dash Dot. |
| Weight | Sets the width of gridlines in pixels (from 1-8). |
| Color | Displays the Select Color dialog box where you can select a gridline color. |
| Number Format | |
| Decimal Places: | Enables you to sets the number of decimal places used to represent data values (0-10). |
| Format: | Enables you to sets the numeric format for data values: Numeric, Currency, Percent. |
| Currency Symbol: | Inserts currency formatting symbols: |
| Labels | |
| Stagger | Alternates labels on two lines to accommodate larger labels. |
| Angle | Enables you to indicates the angle at which labels extend from the current axis: 0-360 degrees. |
| Font | Displays the Font Properties dialog box to select fonts and their formatting. |

Series Effects Chart Properties

Series Effects chart properties impact all chart object series in general. Series chart properties are applied only to specific series.

| Control | Description |
|----------------------------|---|
| Charting | |
| Enable Scrolling | Allows you to specify the number of chart object groups to display, and to scroll left to right to display additional groups. Note: Scrolling is not supported on Quadrant, Box, Pie, and Bubble chart types. |
| Number of Groups Displayed | Specifies the number of chart object groups to display. |
| Chart All Dimensions | Delineates nested dimensions for chart type requirements and displays each combination set as a series. Chart type requirements differ for dimension member position and number. When dimension members exceed a requirement, surplus dimensions are relocated to the page axis so that the designated chart type can be displayed. Enabling Chart All Dimensions prompts Web Analysis Studio to delineate nested dimensions and display each combination set as a series. |
| Borders | |
| Show Borders | Represents chart objects with a border or outline. |
| Style | Represents the chart object border using one style: Solid Line, Dash, Dot, and Dash Dot. |
| Width | Sets the width of chart object border in pixels (from 1-8). |
| Color | Displays the Select Color dialog box where you can set the border color. |

Series Chart Properties

| Control | Description |
|----------------------------|--|
| Series | Indicates the current dimension member chart object series. |
| Style | |
| Show Series | Displays the current series. |
| Type | Sets the chart type for the series when multiple chart types are enabled: Bar, Line, Area, Spline and Curve Area. |
| Shape | Sets the series chart object to one shape: Bar, Cylinder, Diamond Bar, or Triangle Bar. |
| Color | Displays the Fill Properties dialog box where you can set chart object color, pattern fill, or gradient. |
| Assign to Secondary Y-axis | Displays the current series on the secondary y-axis. |
| Markers | |
| Style | Sets the series to one marker: None, Square, Circle, Triangle-Up, Diamond, Cross, Triangle-Down, or Multiple Chart Type. |
| Image Marker | Displays the Select Graphic dialog box enabling graphics to be used as chart markers. Note: You cannot use animated GIFs as marker images. |
| Size | Sets the size of the series marker in pixels (1-20). |
| Point Values | |
| Show Values | Displays data values with the series. |
| Font | Displays the Font Properties dialog box where you can select font and their formatting. |
| Angle: | Indicates the angle at which value labels extend from the current series: 0-360 degrees. |
| Lines | |
| Style | Represents the chart object border using one style: Solid Line, Dash, Dot, and Dash Dot. |
| Width | Sets the width of chart object border in pixels (from 0-8). |
| Apply selections to all. | Sets all series to the parameters of the current series. |

Filling Chart Objects

Like the Select Color dialog, the Fill Properties dialog enables you to select colors for a series of chart objects. In addition, it differentiates chart objects with a pattern or gradient fill.

► To fill chart objects with a pattern fill:

- 1 Select **Chart Properties** from the chart shortcut menu.

- 2 Click the **Series** tab, and **Color** in the **Style** group.

The Fill Properties dialog is displayed.

- 3 Click the **Pattern Fill** option and select a pattern. You can combine two colors in the selected pattern.
- 4 Click **Color 1** or **Color 2** to select a color from the **Select Color** dialog.

► To fill chart objects with a gradient fill:

- 1 Select **Chart Properties** from the chart shortcut menu.
- 2 Click the **Series** tab, and **Color** in the **Style** group. The Fill Properties dialog is displayed.
- 3 Click **Gradient Fill**, and select the direction of the gradient. You can combine two colors in the gradient.
- 4 Click **Color 1** or **Color 2** to select a color from the **Select Color** dialog.

Line Widths of Zero (0)

Line charts accommodate a line width of zero, enabling a line chart to appear as a marks chart. This applies only to two-dimensional line, quadrant, multichart, spline, area, and curve area chart types.

Pie Chart Properties

| Control | Description |
|--------------------|--|
| Values | |
| Values | Indicates the current pie slice. |
| Color | Displays the Select Color dialog box to set color, pattern fill or gradient scale for the current slice. |
| Labels | |
| Show Values | Displays data values with pie slices. |
| Position | Indicates where to display labels: Inside Slices or Outside Slices. |
| Font | Displays the Font Properties dialog box where you can select font and their formatting. |
| Show Multiple Pies | Sets Page Dimensions to be displayed as multiple pie charts in one document. |

Bubble Chart Properties

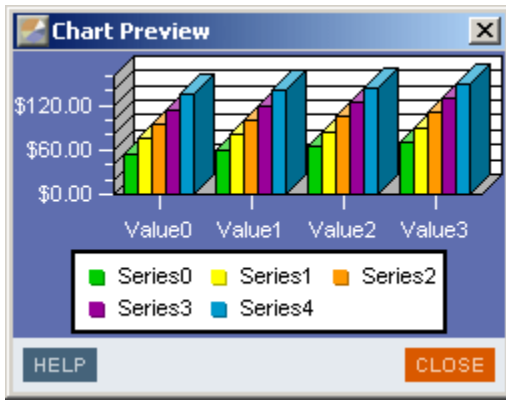
Bubble charts require three dimensions. Only one dimension can be placed on the column axis. Up to two dimensions can be placed on the row axis. There must be two columns in the dimension positioned on the columns axis. These columns may be the result of selecting two dimension members, or the result of including a calculated column with a dimension member. The values in the first two columns provide the X and Y values required to plot the chart.

A third column provides the Z value used to determine the bubble size. If no third column is available, a constant of 100 is used to determine the bubble size.

| Control | Description |
|-------------------------------|--|
| Effects | |
| Marker Style: | Sets the bubble chart to be displayed using these options: none, square, circle, Triangle Up, Diamond, Cross, Triangle Down, or Multi. |
| Maximum Size: | Sets the maximum bubble object size in points. |
| Show Points | Displays plot points. |
| Point Color | Sets the color of the center point. |
| Values | |
| X-member Values: | Indicates the dimension member used to plot x-axis values. |
| Y-member Values: | Indicates the dimension member used to plot y-axis values. |
| Z values: | |
| Constant | Sets the constant used to plot the size of bubble chart objects when no third column is available, so that object sizes match. |
| Z-member Values: | Indicates the third column used to plot the size of bubble chart objects. |
| Scaling | |
| Minimum Scaling: | Sets the minimum bubble size when the bubble object size has reached the Maximum Size limit. |
| Maximum Scaling: | Sets the maximum bubble size when the bubble object size has reached the Maximum Size limit. |
| Scale On: | Sets the bubble chart to determine scale using area or diameter. |
| Borders | |
| Show Borders | Displays or hides the bubble borders. |
| Use Traffic Lights for Colors | Sets the bubble object border to use colors specified in the traffic lighting definition; only one dimension, with a traffic lighting definition, can be positioned on the rows axis |
| Color | Displays the Select Color dialog box. |
| Border Width: | Sets the border width in pixels. |

Chart Preview

Clicking **Preview** displays an abstract of current chart parameters.



Selecting Color

The Select Color dialog box enables you to set object, font, and component colors.

| Control | Description |
|-----------------------|--|
| Swatches Tab | |
| Recent | Displays recently selected colors. |
| RGB Float Over Values | Displays the Red-Green-Blue color values when mouse is floated over a color. |
| HSB Tab | |
| Hue | Sets the percentage of hue in the current color. |
| Saturation | Sets the percentage of saturation in the current color. |
| Brilliance | Sets the percentage of brilliance in the current color. |
| Red | Displays the red value of the current color. |
| Green | Displays the green value of the current color. |
| Blue | Displays the blue value of the current color. |
| RGB Tab | |
| Red | Displays the red value of the current color. |
| Green | Displays the green value of the current color. |
| Blue | Displays the blue value of the current color. |
| Preview | Displays the application of the current color. |

Font Properties

The Font Properties dialog box enables font selection and formatting.

| Control | Description |
|-------------------|--|
| Font | Sets the font family. |
| Size | Sets the font point size. Note: Fonts are limited to 100 points in size. |
| Font Style | |
| Bold | Displays the bold font. |
| Italic | Displays the <i>italic</i> font. |
| Color | Displays the Select Color dialog box, to enable font color selection. |
| Sample Text | Displays the current font selection. |

Selecting Graphics

The Select Graphic dialog box enables you to select the GIF or JPEG files used in Web Analysis Studio.

| Control | Description |
|----------------|---|
| Center | Centers the selected graphic in the panel. |
| Stretch | Expands the selected graphic to fill the panel. |
| Tile | Repeats the selected graphic to fill the panel. |
| Top-Left | Aligns the graphic in the top left corner of the panel. |
| Color | Provides a color palate from which a color can be selected. |
| Load | Displays the Open dialog box, to select the GIF or JPEG graphic file. |
| Clear | Deletes the previously selected image. |

9

Managing Analysis Tools

In This Chapter

| | |
|--|-----|
| Analysis Tools | 113 |
| Activating and Deactivating Analysis Tools | 115 |
| Editing Definitions..... | 115 |
| Show/Hide Only..... | 115 |
| Traffic Lighting..... | 118 |
| Sorting | 121 |
| Restricting Data | 122 |
| Retrieve Only Top/Bottom..... | 124 |
| Data Formatting..... | 125 |
| Calculations | 126 |
| Creating SAP BW Currency Conversion Definitions | 138 |
| Creating SAP BW Unit of Measure Conversion Definitions | 138 |

Analysis Tools

Web Analysis Studio enables you to leverage server-based analytical formatting tools and data source-specific tools from the client. Analysis Tools expedite comparisons, visually organize data, and promote structures and conclusions.

Analysis Tools are data source-specific, and all Analysis Tools are not available in all data objects.

Analysis Tools are centrally organized and applied by the Analysis Tools Manager, accessed using the data object shortcut menu. The Analysis Tools Manager features an Ordered By panel showing the number and order of Analysis Tools definitions activated on the current data object. Toolbar buttons enable you to generate Analysis Tools definitions.

| Analysis Tool | Used To: |
|------------------|--|
| Traffic Lighting | Color-code dimension member values based on fixed limits or a comparison of values. Traffic Lighting visually associates member values whether they are sorted or ranked. |
| Sorting | Order the query result set. |
| Calculations | Create calculated rows and columns. |
| Data Formatting | Format data values based on member or value criteria. |

| Analysis Tool | Used To: |
|----------------------------|---|
| Show/Hide Only | Filter data by color, value and member. |
| Related Content | Create Related Content links to: <ul style="list-style-type: none"> ● LROs - cell notes, URLs, and file attachments stored at Essbase intersections ● Oracle Essbase Integration Services drill-through content ● Financial Management cell text and line item details stored at Financial Management intersections ● Oracle Hyperion Documents content displayed as HTML or PDF ● Oracle's Hyperion® Application Builder for J2EE content |
| Restrict Data | Restrict the query result set based on criteria. |
| Retrieve Only Top/Bottom | Limit and rank the query result set. |
| Currency Conversion | SAP BW—Converts data value currencies ad hoc during analysis, and to save those conversion definitions as analysis tools. |
| Unit of Measure Conversion | SAP BW—Converts the data value unit of measure ad hoc during analysis, and to save those conversion definitions as analysis tools. |
| Edit Selected Definition | Opens the Analysis Tool for the specified definition, enabling you to edit the definition. |
| Remove Selected Definition | Deletes the selected Analysis Tool definition. |
| Remove All | Deletes all defined Analysis Tools definitions. |

Related Content

Related Content definitions can be managed from the Related Content dialog box and Analysis Tools Manager. Edits, including remove and remove all, made in the Related Content dialog box, change the content of the related content definition but do not impact the existence of the definition. You can activate, deactivate, reorder, and remove related content in the Analysis Tools Manager, but you cannot edit related content definitions.

Ordering Analysis Tools

The order in which Analysis Tools definitions are applied affects data object behavior. You can edit the order in which Analysis Tools are applied by selecting Analysis Tools definitions and moving them in the Ordered By panel.

Default Analysis Tools

The Analysis Tools Manager displays default formatting, measures formatting, and spreadsheet option definitions at the top of the Ordered by list panel. These definitions, originating from preferences, database connection properties, and data object properties, are applied before subsequent Analysis Tools definitions. They can be edited, but they cannot be removed or disabled.

Activating and Deactivating Analysis Tools

You can activate and deactivate Analysis Tools definitions without removing them from the Analysis Tools Manager. This enables various Analysis Tools combinations to be used.

- To deactivate Analysis Tools definitions, select the corresponding **Active** option in **Ordered By**.

Editing Definitions

- To edit an Analysis Tools definition:
 - 1 **Right-click a dimension member header and select **Analysis Tools**, then **Analysis Tools Manager**.**
The Analysis Tools Manager is displayed.
 - 2 **Select a definition and click **Edit**.**
The corresponding Analysis Tool dialog box is displayed.
 - 3 **Make selections and define parameters as needed.**
 - 4 **Click **OK**.**
The Analysis Tools Manager is displayed.
 - 5 **Click **Close**.**

Show/Hide Only

The Show/Hide Only analysis tool includes or excludes members by member name, traffic lighting color, or data value criteria. It is an effective means of focusing analysis by values.

The Information panel Show/Hide Only segment displays Show/Hide Only definitions that restrict or display information on the current document.

Topics that discuss the Show/Hide Only analysis tool:

- [“Asymmetrical Analysis” on page 115](#)
- [“Multiple Show/Hide Only Definitions” on page 116](#)
- [“Differences in Show/Hide Only Definitions” on page 116](#)
- [“Creating Show/Hide Only Definitions” on page 117](#)

Asymmetrical Analysis

Asymmetric documents feature nested dimensions that differ (by at least one member) across an axis. Web Analysis Studio accommodates asymmetrical analysis by enabling you to hide specified rows, columns, and chart objects.

Multiple Show/Hide Only Definitions

Multiple Show/Hide Only definitions are applied in order, enabling simultaneous control by member, color, and values.

Differences in Show/Hide Only Definitions

Show/Hide Only definitions are applied differently for each methodology used:

- Show/Hide Only Calculations shows or hides all calculated members.
- Show/Hide Only Members shows or hides dimension members of the dimension header right-clicked in the document.
- Show/Hide Only Values shows or hides dimension members on the axis opposite the dimension header right-clicked in the document.
- Show/Hide Only Colors shows or hides dimension members on the axis opposite the dimension header right-clicked in the document.

Show/Hide Only definitions are created in the Show/Hide Only dialog box:

| Control | Description |
|-------------------------|--|
| Select Method | Show - Displays only items satisfying the Show/Hide Only definition criteria. Hide - Hides only items satisfying the Show/Hide Only definition criteria. |
| Where | |
| Calculations | Shows or Hides all calculated members. |
| Member | Bases the Show/Hide Only definition on specified dimension members of the current axis. |
| Values | Tests whether members of the opposite axis contain values satisfying criteria of the current axis. |
| All Values | Tests whether all members of the opposite axis contain values satisfying criteria of the current axis. |
| Colors | Tests whether members of the opposite axis contain colors satisfying criteria of the current axis. |
| All Colors | Tests whether all members of the opposite axis contain colors satisfying criteria of the current axis. |
| Set Condition | |
| Operator drop-down list | Select an operator for your criteria: Greater than (>), Greater Than or Equal To (>=), Equal to (=), Less Than or Equal To (<=), Less Than (<), Not Equal To (<>). |
| Value Text box | Enables you to enter the value for Show/Hide Only Values conditions. |
| Color | Opens the Select Color dialog box to set the condition color. |
| Members | Lists available dimension members and attributes to which the Show/Hide Only definition is applied. |
| Advanced | Aggregates or separates dimension member combinations. |
| Apply | Applies the definition to the document. |

Creating Show/Hide Only Definitions

► To create a Show/Hide Only definition:

1 Right-click a dimension member header and select **Analysis Tools**, then **Show/Hide Only**.

The Show/Hide Only dialog box is displayed.

2 From **Select Method**, select **Show** or **Hide**.

3 Define one option:

- To show or hide only calculated members, click the **Where** group **Calculations** option.
- To show or hide specified members, click the **Where** group **Members** option and select dimension members from **Members**.
- To show or hide only dimension members if dimension member value satisfies a condition, perform these actions:
 - a. Click the **Where** group **Values** option.
 - b. Select dimension members from **Members**.
 - c. Use the operator list and the value area to define a condition.
- To show or hide only dimension members when all dimension member values satisfy a condition, perform these actions:
 - a. Click the **Where** group **All Values** option.
 - b. Select dimension members from **Members**.
 - c. Use the operator list and the value area to define a condition.
- To show or hide only dimension members if dimension member value satisfies a traffic lighting color condition, perform these actions:
 - a. Click the **Where** group **Colors** option.
 - b. Select dimension members from **Members**.
 - c. From the operator list, select **Equal To (=)** or **Not Equal To (<>)**.
 - d. Click **Color**. The **Select Color** dialog box is displayed. Select one defined traffic lighting range color. The color displays in the large square. Click **OK**. The button displays the selected color.
- To show or hide only dimension members if all dimension member values satisfy a traffic lighting color condition, perform these actions:
 - a. Click the **Where** group **All Colors** option.
 - b. Select dimension members from **Members**.
 - c. From the operator list, select **Equal To (=)** or **Not Equal To (<>)**.
 - d. Click **Color**. The **Select Color** dialog box is displayed. Select one defined traffic lighting range color. The color displays in the large square. Click **OK**. The button displays the selected color.

Note: Show/Hide Only Members is applied to the named dimension member, and Show/Hide Only Values and Show/Hide Only Colors is applied to the opposite axis, using the values in the selected axis.

Color options are only enabled when the data object features an active traffic lighting definition. An Advanced option specifies conditions for dimension member combinations. Apply enables you to apply the definition to the current data object, without exiting the dialog box. Drag the dialog box title bar to see the data object underneath.

4 Click OK.

The current definition is added to the Analysis Tools Manager.

5 Click Close.

Traffic Lighting

The Traffic Lighting analysis tool color-codes data cells based on dimension member values. You can base color-coding on a comparison of two dimension members or by fixed limits on one dimension member. Colors graphically associate member values, whether they are sorted or ranked. Traffic Lighting definitions are maintained as the document is pivoted and changed.

The Information panel Traffic Lighting segment displays the Traffic Lighting definitions that color-code the current data object.

Traffic Lighting definitions are created in the Traffic Lighting dialog box:

| Control | Description |
|-------------------------------|--|
| Apply Traffic Lighting To: | Specifies the dimension to which traffic lighting is applied. |
| Comparing It To: | Specifies the dimension to which the preceding dimension is compared. |
| Assign Limits | Specifies the interval, set point, and color parameters that compose the traffic lighting definition. |
| % Differences | Indicates that the color-coding is based on the percent difference of the compared members. When disabled, color-coding is based on the value difference of the compared members. |
| Enable Financial Intelligence | Enables Oracle Hyperion data sources to treat expenses and liabilities as negative values. Works in cooperation with the % differences option to reflect variance and variance percent calculations for the traffic lighting dialog box. |
| Advanced | Aggregates or separates dimension member combinations. |
| Apply | Applies the definition to the document. |

Topics that discuss traffic lighting:

- [“Financial Intelligence Variations” on page 119](#)
- [“Assign Limits Shortcut Menu” on page 119](#)

- [“Creating Traffic Lighting Definitions” on page 120](#)
- [“Setting Traffic Lighting Opacity” on page 120](#)

Financial Intelligence Variations

The % Differences and Enable Financial Intelligence options cooperate to provide four calculations for the Traffic Lighting dialog box.

- When neither option is selected, the Traffic Lighting dialog box compares selected members using a conventional **subtraction** calculation.
- When only the % Differences option is selected, the Traffic Lighting dialog box compares the selected members using a conventional **percent difference** calculation.
- When the Enable Financial Intelligence option is selected, the Traffic Lighting dialog compares the selected members using an advanced **variance** calculation that recognizes expenses and liability dimensions as negative values.
- When both options are selected, the Traffic Lighting dialog compares the selected members using an advanced **variance percent** calculation that recognizes expenses and liability dimensions as negative values.

Understanding the calculations and the nature of your dimension metadata helps you to better compare dimensions.

Assign Limits Shortcut Menu

The Assign Limits color band and the Set Point arrows feature context-sensitive shortcut menus:

| Control | Description |
|------------------------------------|--|
| Assign Limits Shortcut Menu | |
| Add Set point | Inserts a set point within the range. |
| Set Color | Opens the Select Color dialog box where you can set the range color. |
| Set Opacity | Opens the Opacity dialog box, enabling you to determine the percentage of transparency for the selected range color. |
| Set Point Shortcut Menu | |
| Color Above Set point | Sets the set point color to that of values greater than the set-point. |
| Color Below Set point | Sets the set point color to that of values less than the set-point. |
| Delete Set point | Opens the Confirm Deletion message box where you can confirm intentional deletion of the set point. |

Note: Setting traffic lighting colors to colors used by Spreadsheet Options may obscure the color-coding of dimension members.

Creating Traffic Lighting Definitions

► To create a traffic lighting definition:

1 Right-click a dimension member header and select **Analysis Tools**, then **Traffic Lightt**.

The Traffic Lighting dialog box is displayed.

2 Select the dimension member to which traffic lighting is applied, from **Apply Traffic Lighting To**.

3 From **Comparing It To**, select the dimension member to which the preceding dimension member is compared.

- Compare to a fixed limit by disabling the % Differences option in the Assign Limits group box, or by selecting Fixed Value from Comparing It To.
- Select the Advanced option to separate dimension members into combinations. Click it again to select from aggregated dimension members.

The Assign Limits option contains three default set points and colors.

4 Right-click ranges to:

- Insert another set point.
- Redefine the range color.
- Set range opacity or transparency.

5 Right-click a set point arrow to:

- Include the set point in the range above.
- Include the set point in the range below.
- Delete the set point.

6 Click the set point text box to enter or edit set point threshold values.

7 Click **Apply**.

8 Click **OK**.

Setting Traffic Lighting Opacity

The Opacity dialog box enables you to define transparent traffic lighting ranges and set points, and to control the percentage of transparency for these ranges and set points.

This is especially valuable when you want background images to show through spreadsheets with color comparisons and traffic lighting definitions.

► To specify transparency for a traffic lighting range or set point:

1 In the Traffic Lighting dialog box, right-click an **Assign Limits** range or set point and select **Set Opacity**.

2 The Opacity dialog box is displayed.

3 Drag the slider bar to the desire percentage of transparency.

- 4 If you want to apply this percentage of transparency to all other ranges and set points, click **Apply to All Colors**.
- 5 Click **OK**.

Sorting

The Sorting analysis tool orders specified dimensions of the query result set in ascending or descending alphanumeric order. Sorting definitions are dynamic and are applied as the document is drilled, pivoted, and changed.

The Information panel Sorting segment displays all client-based sorting definitions.

Multiple sorting definitions are applied in the order presented by the Analysis Tools Manager. Sorting definitions applied to axes with equal values may subsequently be rearranged by sorting definitions applied to axes with diverse values. The document display is the result of the cumulative application of all active sorting, client-side and server-side, even though it may appear that only the last sorting definition is applied.

Sorting Dialog Box

Sorting definitions are created in the Sorting dialog box.

| Control | Description |
|--------------|--|
| Sort On | Specifies the dimension member to which the sorting definition is applied. |
| Order | |
| Ascending | Selects ascending alphanumeric order for the result set display. |
| Descending | Selects descending alphanumeric order for the result set display. |
| Apply | Apply the definition to the document. |

Creating Sorting Definitions

- To create a sorting definition:
 - 1 Right-click a dimension member header and select **Analysis Tools**, then **Sort**.
The Sorting dialog box is displayed.
 - 2 Select the dimension member to which sorting is applied, from **Sort On**.
 - 3 Select **Ascending** or **Descending**.
 - 4 Click **Apply**.
 - 5 Click **OK**.

Restricting Data

The Restrict Data analysis tool provides another means of narrowing the return set, by requiring data values to be relevant to rules and operands. Data can be restricted by a comparison between columns or using fixed limits on one column.

The Information panel Restrict Data segment is displayed Essbase Restrict Data definitions for the current document.

Restrict Data is executed by Essbase. This can protect the network server from transmitting, and the client from processing, large result sets.

Although you can apply Restrict Data to the result set of a processed query (using the Analysis Tools shortcut menu), you can also define Restrict Data criteria before submitting a query. The last step in the Document Creation wizard enables you to create Restrict Data definitions.

Topics that discuss restricting data:

- [“Restrict Data Controls” on page 122](#)
- [“Creating Restrict Data Definitions” on page 122](#)

Restrict Data Controls

| Control | Description |
|-------------------------|--|
| Select Column | Displays the Select Column dialog box, enabling you to select a column from the current document. |
| Operator drop-down list | Select an operator for your criteria: Greater than (>), Greater Than or Equal To (>=), Equal to (=), Less Than or Equal To (<=), Less Than (<), Not Equal To (<>). |
| Operand drop-down list | Specifies one of three operands for restricting data: <ul style="list-style-type: none">● A value Of - Restricts Data to a value or range of values.● The Data Value of Column - Displays a secondary Select Column button, enabling you to compare two columns.● A Missing Value - Enables restriction of missing values. |
| Value Text box | Enables you to enter the value for Restrict Data conditions. |

Note: Only use one member per dimension in filters when restrict data and /or retrieve top/ bottom is applied. When multiple members are selected per dimension, the application aggregates the results. Because restrict data and retrieve top/bottom are parts of the Essbase query, the aggregation occurs after the query is returned and may result in unexpected result sets.

Creating Restrict Data Definitions

► To create a Restrict Data definition:

- 1 Perform one:

- Right-click a dimension member header and select **Analysis Tools**, then **Restrict Data**.
- Right-click a dimension member header and select **Analysis Tools**. When the Analysis Tools Manager is displayed, select **New Restrict Data**.
- Select **Restrict Data** from Data Layout **Options**.
- In the last step of the Document Creation wizard, click **Restrict Data**.

The Restrict Data dialog box is displayed.

2 Click **Select Column.**

The Restriction Columns dialog box is displayed.

3 Select the Column to which the Restrict Data definition is applied, and click **OK.**

Focus is returned to the Restrict Data dialog box.

4 Select an operator from **Operator.**

5 Select an operand from the Operand menu: **A Value Of, The Data Value of Column, or A Missing Value.**

6 Enter a data value in **Value, as needed.**

7 Click **Add.**

The restriction criteria is listed in the Restriction Definition frame. You can use the **Advanced** button to create compound definitions with additional criteria.

8 **Optional: Click **Advanced** to add criteria, update the definition, remove one or all definitions, connect individual definitions with an AND or OR, or move a criteria.**

| Advanced Option | Sub menu | Description |
|------------------------|-----------------|--|
| Add | | Add the current rule to the Total Subset Definition. |
| Update | | Replace the selected rule with the current rule. |
| Validate | | Verifies the parenthetical syntax of the Total Subset Definition. |
| Remove | | Remove the current rule from the Total Subset Definition. |
| Remove All | | Remove all rules from the Total Subset Definition. |
| Connect | And | Inserts the AND operand at the end of the currently selected rule. The AND operand is used by default when multiple rules are added to the Definition. |
| | Or | Inserts the OR operand at the end of the currently selected rule. |
| Move | Move Up | Moves up the currently selected rule in the Total Subset Definition. |
| | Move Down | Move the currently selected rule down in the Total Subset Definition. |

9 Click **OK.**

Retrieve Only Top/Bottom

The Retrieve Only Top/Bottom analysis tool leverages Essbase server-based sorting and ranking to control the size and order of an OLAP query result set. This can protect the network server from transmitting, and the client from processing, large result sets. The Retrieve Only Top/Bottom analysis tool is central to top/bottom analysis.

Although you can apply Retrieve Only Top/Bottom to the result set of a processed query (using the Analysis Tools shortcut menu), you can also define Retrieve Only Top/Bottom criteria before submitting a query. Click the Data Layout Options button and select the Retrieve Only Top/Bottom menu item, to define a Retrieve Only Top/Bottom definition before sending a query. The last step of the Document Creation wizard also enables you to create Retrieve Only Top/Bottom definitions.

The Information panel Retrieve Only Top/Bottom segment is displayed all Essbase Retrieve Only Top/Bottom definitions for the current document.

Behavior of multiple row dimension member selection

Retrieve Only Top/Bottom Analysis Tool restricts the use of multiple row dimension member selections, because Top/Bottom applies only to one dimension. When you add a dimension to a row and retrieve the top two members of a column, the Top/Bottom Analysis Tool displays the top two members for each member of the first dimension instead of the top two members of the selected column.

Analysis Tools and Multiple Filter Axis Dimension Members

Multiple filter dimension member selections impact Retrieve Only Top/Bottom.

Multiple filter axis dimension members are aggregated before being sent in a query. Because the client-based aggregation does not exist in the data source server, the query is processed in terms of the data values on the server. The discrepancy between client aggregations and server-based sorting and ranking results in irregular result sets.

Nominate only single filter dimension member selections when using Retrieve Only Top/Bottom and Restrict Data analysis tools.

| Control | Description |
|----------------|--|
| Select Column | Specifies the columns to which the Retrieve Only Top/Bottom definition is applied. |
| Show | Limits the result set to these criteria: |
| Top | Selects the number of highest data values indicated by the corresponding value text box. |
| Bottom | Selects the number of lowest data values indicated by the corresponding value text box. |
| Sorting | |
| Ascending | Displays the result set in ascending alphanumeric order. |

| Control | Description |
|------------|---|
| Descending | Displays the result set in descending alphanumeric order. |
| Clear | Deletes all Retrieve Only Top/Bottom definitions. |

Creating Retrieve Only Top/Bottom Definitions

► To create a Retrieve Only Top/Bottom definition:

1 Perform one:

- Right-click a dimension member header and select **Analysis Tools**, then **Retrieve Only Top/Bottom**.
- Right-click a dimension member header and select **Analysis Tools**. When the Analysis Tools Manager is displayed, select **New Retrieve Only Top/Bottom**.
- Select **Retrieve Only Top/Bottom** from **Data Layout Options**.
- In the last step of the Document Creation wizard, click **Retrieve Only Top/Bottom**.

The Retrieve Only Top/Bottom dialog box is displayed.

2 Select the column to which the Retrieve Only Top/Bottom definition is applied from **Select Column**.

3 Limit the result set by selecting **Top** or **Bottom** and indicating the number of members in **Value**.

4 Sort the result set by selecting **Ascending** or **Descending**.

5 **Optional:** To remove all selections from the current definition and start over, select **Clear**.

6 Click **OK**.

Data Formatting

Data Formatting options automatically format headers and data values by dimension member and criteria. While formatting options are fixed, the formatting scope varies depending on the formatting source. See [“Formatting Order of Precedence” on page 92](#).

Note: For behavior when formatting Date and Text Measures cells, see [“Date and Text Cell Behavior” on page 50](#).

- To create a Data Formatting definition, right-click a dimension member header and select **Analysis Tools**, then **Format**.
- To edit Data Formatting definitions, right-click a dimension member header, select **Analysis Tools**, then **Analysis Tools Manager**, and double-click the desired data formatting definition.

For information on creating data formatting definitions, see the [Chapter 8, “Formatting Documents”](#) chapter.

Calculations

You can create client-side calculated members, and edit, delete, and analyze these calculations.

The order of calculation definitions in the Analysis Tools Manager establishes a precedent for subsequent compound calculations. You can change the order of calculation definitions, by selecting the definition and clicking the up and down arrow buttons.

The complete list of calculations includes:

- [“Absolute Value” on page 127](#)
- [“Average” on page 127](#)
- [“Cumulative” on page 127](#)
- [“Difference from Average” on page 127](#)
- [“Divide” on page 128](#)
- [“Linear Regression” on page 128](#)
- [“Maximum” on page 128](#)
- [“Maximum Value” on page 128](#)
- [“Minimum” on page 129](#)
- [“Minimum Value” on page 129](#)
- [“Multiply” on page 129](#)
- [“Percent” on page 129](#)
- [“Percent Difference from Average” on page 130](#)
- [“Percent of Difference” on page 130](#)
- [“Percent of Member” on page 130](#)
- [“Percent of Total” on page 130](#)
- [“Rank Ascending” on page 131](#)
- [“Rank Descending” on page 131](#)
- [“Subtract” on page 131](#)
- [“Sum” on page 131](#)
- [“Square Root” on page 131](#)
- [“Trend” on page 132](#)
- [“Variance” on page 132](#)
- [“Variance Percent” on page 132](#)
- [“Complex Calculations” on page 132](#)
- [“Creating Calculations” on page 133](#)

- [“Modifying Calculations” on page 137](#)

Absolute Value

- **Function Performed** — Returns the absolute value of a numeric value. The absolute value of a number is that number without a negative sign. A negative number becomes positive, while a positive number remains positive.
- **Number of Arguments** — One member or calculation.
- **Options** — Whether missing values should be set to 0 in the calculation and included in the number of arguments.

Example — If Actual is -100, the Absolute Value of Actual is 100.

Average

- **Function Performed** — Sum of all arguments divided by the number of arguments.
- **Number of Arguments** — Two or more members or calculations.
- **Options** — Whether missing values should be set to 0 in the calculation and included in the number of arguments.

Example — If Actual is 100 and Budget is 200, the Average of Actual and Budget is 150.

Cumulative

- **Function Performed** — Provides a running total.
- **Number of Arguments** — One member or calculation.
- **Options** — Whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If the Actual values for these products were 100, 200, and 300, the Cumulative column would be 100, 300, 600.

Difference from Average

- **Function Performed** — Subtracts each argument's average value from each occurrence of the argument.
- **Number of Arguments** — One member or calculation.
- **Options** — Whether missing values should be set to 0 for the purposes of the calculation.

Example — Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If the Actual values for these products were 100, 200, and 300, the average would be 200. So the Difference from Average column would be -100, 0, 100.

Divide

- **Function Performed** — Arithmetic division.
- **Number of Arguments** — Two members or calculation.
- **Options** — Whether missing values should be set to zero in the calculation.

Linear Regression

- **Function Performed** — Straight-line linear regression. Looks at all occurrences of the specified argument, and uses a linear regression algorithm to calculate a 'straight line' through the occurrences.
- **Number of Arguments** — One member or calculation.
- **Options** — Whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with Actual as a column and Jan, Feb, Mar as rows. If the Actual values for these time periods were 100, 300, and 600, the Linear Regression column would be 83, 333, 583. Notice that there is now a constant difference between each value (250). All points in the sequence are adjusted. A chart of these numbers would produce a straight line that goes through the original data points.

Maximum

- **Function Performed** — Given two or more arguments, Maximum returns the name of the member or calculation that has the maximum value.
- **Number of Arguments** — Two or more members or calculations.
- **Options** — Whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If the East values were 100, 300, and 600 and the West values were 200, 200, 300, the Maximum column would be West, East, East.

Maximum Value

- **Function Performed** — Given two or more arguments, Maximum Value returns the value of the member or calculation that has the maximum value.
- **Number of Arguments** — Two or more members or calculations.
- **Options** — Whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If the East values were 100, 300, and 600 and the West values were 200, 200, 300, the Maximum Value column would be 200, 300, 600.

Minimum

- **Function Performed** — Given two or more arguments, Minimum returns the name of the member or calculation that has the minimum value.
- **Number of Arguments** — Two or more members or calculations
- **Options** — Whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If the East values were 100, 300, and 600 and the West values were 200, 200, 300, the Minimum column would be East, West, West.

Minimum Value

- **Function Performed** — Given two or more arguments, Minimum Value returns the value of the member or calculation that has the minimum value.
- **Number of Arguments** — Two or more members or calculations
- **Options** — Whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If the East values were 100, 300, and 600 and the West values were 200, 200, 300, the Minimum Value column would be 100, 200, 300.

Multiply

- **Function Performed** — Arithmetic multiplication.
- **Number of Arguments** — Two or more members or calculations, or one member or calculation and a constant.
- **Options** — You can specify a constant as an argument if you want to work with one rather than two members or calculations. You can also choose whether missing values should be set to 0 in the calculation.

Percent

- **Function Performed** — Percentage calculation.
- **Number of Arguments** — Two members or calculations, or one member or calculation and a constant.
- **Options** — You can specify a constant as an argument if you want to work with one rather than two members or calculations. You can also choose whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with Actual and Budget as columns and Jan, Feb, Mar as rows. If the Actual values were 100, 300, and 600 and the Budget values were 200, 200, 400, the Percentage column (Actual % Budget) would be 50, 150, 150.

Percent Difference from Average

- **Function Performed** — Performs the same actions as Difference from Average but displays each result as a percentage of average.
- **Number of Arguments** — One member or calculation.
- **Options** — Whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If the Actual values for these products were 100, 200, and 300, the average would be 200. So the Difference from Average (%) column would be -50, 0, 50.

Percent of Difference

- **Function Performed** — Percentage difference calculation.
- **Number of Arguments** — Two members or calculations, or one member or calculation and a constant.
- **Options** — You can specify a Constant as an argument if you want to compare a member with a fixed value. You can also choose whether missing values should be set to 0 in the calculation.

Example — Consider a spreadsheet with Actual and Budget as columns and Jan, Feb, Mar as rows. If the Actual values were 100, 300, and 600 and the Budget values were 200, 200, 400, the Percentage difference column (Actual % diff Budget) would be calculated as $((\text{Actual} - \text{Budget}) / \text{Budget}) * 100$ and shown as -50, 50, 50.

Percent of Member

- **Function Performed** — Evaluates a dimension member argument as a percentage of another dimension member argument. The second argument is defined by the dimension member intersected on an opposite axis.
- **Number of Arguments** — Two or more members or calculations, or one member or calculation and a constant.
- **Options** — You can choose whether missing values should be set to 0 in the calculation.
- **Procedure** — Select a Percent of Member calculation from the Function list, select a dimension member argument, and select a dimension member from the opposite axis using the Opposite Member drop-down list.

Percent of Total

- **Function Performed** — Percentage of total.
- **Number of Arguments** — One member or calculation.
- **Options** — None.

Example — Consider a spreadsheet with Actual as a column and Jan, Feb, Mar as rows. If the Actual values were 100, 300, and 600, the Percentage of Total column would be shown as 10, 30, and 60.

Rank Ascending

- **Function Performed** — Ranking.
- **Number of Arguments** — One member or calculation.
- **Options** — The smallest value is given a ranking of 1.

Example — Consider a spreadsheet with Actual as a column and Jan, Feb, Mar as rows. If the Actual values were 100, 300, and 600, the Rank column would be shown as 3, 2, 1.

Rank Descending

- **Function Performed** — Ranking.
- **Number of Arguments** — One member or calculation.
- **Options** — The largest value is given a ranking of 1.

Subtract

- **Function Performed** — Arithmetic subtraction.
- **Number of Arguments** — Two members or calculations, or one member or calculation and a constant.
- **Options** — You can choose whether missing values should be set to 0 in the calculation.

Sum

- **Function Performed** — Arithmetic addition.
- **Number of Arguments** — Two or more members or calculations, or one member or calculation and a constant.
- **Options** — Whether missing values should be set to 0 in the calculation.

Square Root

- **Function Performed** — Returns the square root of a numeric value.
- **Number of Arguments** — One member or calculation.
- **Options** — Whether missing values should be set to 0 in the calculation and included in the number of arguments.

Example — If Actual is 100, the Square Root of Actual is 10.

Trend

- **Function Performed** — Trend based on straight-line Linear Regression; that is, the slope of the 'straight line' that a Linear Regression calculation would plot between the points in the original data series.
- **Number of Arguments** — Two or more members or calculation.
- **Options** — Whether missing values should be set to 0 in the calculation

Variance

- **Function Performed** — Arithmetic subtraction that uses Financial Intelligence account metadata to interpret Financial Management expense and liability items as negative values.
- **Number of Arguments** — Two members or calculations, or one member or calculation and a constant.
- **Options** — You can choose whether missing values should be set to 0 in the calculation.

Variance Percent

- **Function Performed** — Percentage difference calculation that uses Financial Intelligence account metadata to interpret Financial Management expense and liability items as negative values.
- **Number of Arguments** — Two members or calculations, or one member or calculation and a constant.
- **Options** — You can specify a Constant as an argument if you want to compare a member with a fixed value. You can also choose whether missing values should be set to 0 in the calculation.

Complex Calculations

Oracle recommends dividing complex calculations into components and combining the components into a compound calculation.

Example: To set up a calculation for $(A + B) / (C \times 2)$, where A, B, and C are members, you divide the formula into steps:

- Set up Sum for $A + B$, and name it Step 1.
- Set up Multiply for $C \times 2$, and name it Step 2.
- Set up Divide for Step 1 result divided by Step 2 result, and name it Step 3.
- Use Show Only Members to hide Step 1 and Step 2. If you want to switch between seeing only members, seeing only calculations, and seeing both, you can use the Hide option in your document right-click menu.

Creating Calculations

You can use a combination of members, functions and/or operators to create a formula using the Functions and Members tabs, as well as the operators buttons. You can create a formula by using members and operators, without functions, or you can combine members, functions and operators in a formula. You also can create and edit advanced expressions by manually entering and editing the formulas.

An editor field, Formula Body, allows you to manually enter and edit the formula using a syntax that resembles multidimensional expressions (MDX) for defining members. However, while the syntax definition for defining members resemble the MDX format, MDX statements are not supported in the Web Analysis calculations. A formula is created by selecting a combination of Function and Member(s). For more information, see Using the Manual Formula Syntax.

Toolbar buttons for Cut, Copy, Paste and Validate are activated when a formula is entered in the Formula Body. The Validate button checks the validity of the formula for any errors and returns an error box to confirm whether validation succeeded or an error exists. The result of the formula is shown in the Formula field and can be inserted into the report by clicking the Insert button. Existing functions can be grouped together in one expression. If you want to switch between seeing only members or only calculations, or both, you can use the Hide option in the shortcut menu on your document.

Note: You can select Dynamic row or column references instead of selecting members from the report. The formatting is applied regardless of the member selection. If a calculation refers to a specific column, and that column is deleted through member selection, the calculation is handled correctly. If a swap or pivot is performed, the calculation will “carry” where possible.

► To create a calculation:

1 Right-click a dimension member header and select **Analysis Tools**, then **Calculation**.

The Calculation Definition dialog box is displayed, containing three tabs: Functions, Members and Options.

- The **Members** tab is for selecting members and adding them to a formula (for example, [Sales] - [COGS], outside a formula function. You can select one or more members in the **Select Members** list, click **Insert** to insert to the formula **Definition**.
- The **Functions** tab is for inserting formula functions into the **Definition** area after selecting a function and members. You can add and remove members and constants to the formula. Once a function is selected, it appears in the **Formula** area. Members (or dynamic references) can be added to the formula by clicking on each member/reference, then clicking on **Add** to add it to the **Arguments** area. The **Formula** area is updated with arguments once they are added. When the formula is complete, it can be inserted to the **Definition** area by clicking **Insert**.
- The **Options** tab provides **Missing Values** and **Select Positions** settings.

2 The following areas are displayed for all three tabs:

- Name — the name of the formula.

- Definition — displays the formula. It allows for manual entry and editing of the formula. The Cut, Copy, Paste, and Validate buttons become enabled.
- Mathematical Operators — symbols that provide types of calculations that you can perform on the elements of a formula; addition (+), subtraction (-), multiplication (*), division (/), parenthesis (()).

3 You can create a formula by using members on the **Members tab. Perform the following:**

- In the **Select Members** area, select members.
- In **Advanced** — click to list all dimension member combinations and add them to the formula **Definition** area. When deselected, only members from one dimension are shown.
- In **Dynamic References** — select to enable the selection of a row or column reference

4 Click **Insert to add the formula.**

5 To create a formula using functions, in the **Functions tab, perform the following:**

- Select a calculation type from the **Function** list.
- Replace the undefined arguments, displayed with a (?) in the **Arguments** area, with a member located in the **Select Members** area. Do this by selecting the member and clicking the right arrow button.
- To replace an undefined argument (?) with a value, enter a value in the **Constant** text box, and click the right arrow button.
- To replace an undefined argument from dimension member combinations, select **Advanced** to display dimension member combinations. Click to select a dimension member combinations label, and click the right arrow button to replace an undefined argument (?).
- Select **All Members** to quickly select all available dimension members.
- Click **Insert** to include the formula in the definition.
- When the calculation is defined, click **Apply** and **OK**.

The following list describes the items on the **Functions** tab.

- **Formula** — displays the formula result
- **Functions** — provides pre-written formulas such as adding values, dividing values, calculating averages
- **Select Members** — provides members to be included during calculation
- **Advanced** — click to select a dimension member combination label. If the row or column context of the calculation has multiple dimensions, **Advanced** shows all dimension in the row or column. When deselected, only members from one dimension are shown.
- **All Members** — select to select all dimension members
- **Dynamic References** — enable to select a row or column reference.
- **Constant** — type a value to use in a function. For example, instead of `Sum("Qtr1", "Qtr2")`, you could have `Sum("Qtr2", 155) ..`

- **Optional. Opposite Member** — select to evaluate a dimension member argument as a percentage of another dimension member argument. The second argument is defined by the dimension member intersected on an opposite axis
 - Select a Percent of Member calculation from the Function list.
 - Select a dimension member argument.
 - Select a dimension member from the opposite axis using the Optional Opposite Member list.

Note: The **Opposite Member** list in the arguments frame is enabled only for the Percent of Member Calculation. This control evaluates a dimension member argument as a percentage of another dimension member argument. The second argument is defined by the dimension member intersected on an opposite axis.

6 On the **Options** tab, perform the following:

- **Ignore Calculations** — excludes calculated members from the equation when “All Members” is selected.
- **Optional. Missing Values** — provides option for how missing values are treated; include, exclude, or treat as a number that you specify.
 - **Include** — calculates missing values as they are stored.
 - **Exclude** — removes arguments populated by missing values from the calculation.
 - **Treat as Number** — populates the argument with the value indicated. Default is zero (0).
- **Select Position** — provides options for specifying the location of the calculated row or column.
 - **Front/Top**
 - **Back/Bottom**
 - **Insert Before**
 - **Insert After**
 - **Insertion Point** — If you selected **Insert Before** or **Insert After**, select an insertion point from the corresponding list. The calculated row or column is inserted before or after the specified dimension header.
- **Ignore Calculations** — selected to exclude calculated members from the equation when “All Members” is selected.

7 When the calculation is defined, click **Apply** and **OK**.

Using the Manual Formula Syntax

If a member name contains unsupported characters or symbols, it should be enclosed in brackets – []; If the name does not contain such symbols, it can be used as is. Some guidelines:

1. [New York] + West + East — correct
2. East + New York — incorrect: member name New York contains spaces.

3. Old style syntax (member names are separated by “:”). For advanced members, can be used if member names contain “good” symbols only. for example:

Qtr1:West + Qtr2:East — correct

Qtr3:New York — incorrect

4. For new MDX style syntax, a list of comma – separated member names is included between “(‘and’)”. Member names must be included within [] according to the same rules as for simple members. For example:

([New York], West) — correct

(New York, West) — incorrect

5. Simple and advanced members must not be mixed in one formula body. For example:

([New York], West) + East — incorrect

Qtr1:West + South — incorrect

6. All members' specification in the script is defined by keyword @selectAllMembers. For example:

Average(@selectAllMembers) + 1234 + [East]

7. All members' specification can be used in the script several times. For example:

Sum(@selectAllMembers) – Sum(@selectAllMembers) — correct, always zero

8. Dynamic references are specified by the following way; for rows they are in form @row<ROW NUMBER>, for columns they are @col<COLUMN NUMBER>. For example:

@col + @col5 – @col16/100@row2 – @row3

9. In one expression, row and column dynamic references should not be mixed. For example:

@col + @row1 — incorrect. An error message occurs.

10. You can mix members and dynamics references in one expression, with the following restriction: If the axis (row or column) contains several dimensions, an advanced members' specifications must be used. For example:

@row1 + [Qtr1] — correct only if row axis contains one dimension – Year

@col2 + Qtr1:West — correct if column contains Year and Market.

11. Opposite members are used only for one function – Percent_of_Member. An @ character must precede the opposite member. For example:

2* Percent_of_Member (Qtr1, @Colas) — correct

[Qtr2] + Percent_Of_Member (Qtr, @Root Beers)) — correct

Percent_Of_Member (Qtr1, @ [Root Beers]) — incorrect; space after @

Modifying Calculations

► To modify a calculation:

- 1 **Right-click a dimension member header and select **Analysis Tools**, then, **Analysis Tools Manager**.**

The Analysis Tools Manager is displayed.

- 2 **Click a calculation definition.**

- 3 **Click **Edit**.**

The Calculation Definition dialog box displays the arguments for the selected calculation definition.

- 4 **Optional: To change the calculation definition name, enter a name in **Name**.**

- 5 **Optional: To move the calculation position, select another option.**

- 6 **Optional: If you selected **Insert Before** or **Insert After**, select an insertion point from the corresponding list.**

The calculated row or column is inserted before or after the specified dimension header.

- 7 **Optional: To change the calculation type, select a calculation type from **Function**.**

Changing the calculation type requires that the user to redefine all arguments. For instructions, See [To create a calculation:](#).

- 8 **Optional: To change the arguments for the calculation, perform one:**

- Click an argument, click a dimension member label, and click the arrow button.
- Click an argument, enter a value in the Constant text box, and click the arrow button.
- Select **Advanced** to display dimension member combinations. Click an argument, click a dimension member combination label, and click the arrow button.

The calculation definition is displayed in the Formula group box.

- 9 **When the calculation is redefined, click **Apply** and **OK**.**

- 10 **Click **Close**.**

Essbase Attribute Calculations

Web Analysis Studio leverages server-based Essbase attribute calculations in the client. Server-based calculations are performed by the server before returning the OLAP query result set. This minimizes the result set and network traffic.

To use attribute calculations, you must use Data Layout to select the attribute calculations dimensions to participate in the query. You must use Dimension Browser to select the server-based calculations to be returned by the query result set.

Note: You can reproduce attribute calculations in Web Analysis Studio, but the onus is on you to define these calculations, and the client to process the result set.

Consider the use of attribute members in these calculations:

- You can select, aggregate and document on data sharing common attributes.
- You can select attributes by their data types: text, numeric, Boolean, and data type.
- You can group numeric data types into statistical ranges.
- You can use sum, count, min, max, and average functions on the attribute calculations dimension automatically generated by Essbase.
- You can use numerical attribute values from calculation scripts and member formulas in calculations.
- You can create crosstabs of attribute data for one dimension, and analyze the dimension in terms of each attribute.

Creating SAP BW Currency Conversion Definitions

SAP BW converts data value currencies ad hoc during analysis, and saves conversion definitions as analysis tools. You can activate and deactivate currency conversion definitions without removing them from the Analysis Tools Manager, enabling currency combinations that differ.

► To create a currency conversion definition:

- 1 **Right-click a dimension member header and select **Analysis Tools**, then **Currency Conversion**.**

The SAP Currency Conversion dialog box is displayed. Because exchange rates fluctuate, you must indicate the exchange rates and supported currencies for a date. You can use the arrow controls to the left and right of the current month and year, to scroll to another date.

- 2 **Scroll to the month and year of a date, and click the cell for the date.**

The selected date is highlighted.

- 3 **In the **Select Currency To** list, select the currency to which you would like a currency converted.**

Your options may be limited to the currencies supported by the date of your exchange rate.

- 4 **In the **Select Currency Rate** list, select the exchange rate used to convert currency.**

- 5 **In the **Select Currency From** list, select the currency that you would like to convert.**

Your options may be limited to the currencies supported by the date of your exchange rate.

- 6 **Click **OK**.**

All data values using the last currency selection are converted to the specified currency, using the specified exchange rate. Repeat this process to convert all data values to one currency.

Creating SAP BW Unit of Measure Conversion Definitions

SAP BW converts data value unit of measure ad hoc during analysis, and saves conversion definitions as analysis tools. You can activate and deactivate unit of measure conversion

definitions without removing them from the Analysis Tools Manager, enabling unit of measure combinations that differ.

Note: To use the Unit of Measure Conversion analysis tool, the 0MATERIAL characteristic must be selected as a data object column, row, or page dimension.

➤ To convert all units of a measure to another unit of measure:

1 Right-click a dimension member header and select **Analysis Tools, then **Unit of Measure Conversion**.**

The SAP Unit Conversion dialog box is displayed.

2 From the **Unit From list, select a unit of measure that you would like to convert.**

3 From the **Unit To list, select the unit of measure into which you would like your previous selection converted.**

The drop-down list displays known conversion rates from your SAP BW 0MAT_UNIT table. You must define a logical conversion for the analysis tool to work.

4 Optional: To define a custom unit of measure conversion using these steps:

a. From the **Unit To** list, select **Custom Unit**.

b. In **Select Custom to Rate**, enter a unit name in **Unit Name**.

c. Enter a custom conversion factor in **Conversion Factor**.

5 Click **OK.**

All data values using the specified unit of measure are converted using the standard or custom conversion rate. Repeat this process to convert all data values to one unit of measure.

In This Chapter

| | |
|---|-----|
| Smart View..... | 141 |
| Exporting Data Options..... | 142 |
| Exporting All Report Objects to Microsoft Office..... | 144 |
| Exporting a Screen to Microsoft Word or PowerPoint..... | 144 |
| Exporting to the Clipboard..... | 144 |
| Export Data Unformatted..... | 144 |
| Export Options..... | 145 |
| Saving As HTML..... | 146 |
| E-mailing Document Links..... | 147 |

Smart View

Oracle Hyperion Smart View for Office, Fusion Edition for Office provides a common Microsoft Office interface for these Oracle | Hyperion products:

- Essbase
- Financial Management
- Oracle Hyperion Planning, Fusion Edition
- Oracle Hyperion Financial Reporting, Fusion Edition
- Oracle's Hyperion® Interactive Reporting
- Oracle's Hyperion® SQR® Production Reporting
- Web Analysis

The centralized interface enables simultaneous use of multiple Oracle | Hyperion products, and improves integration with Microsoft Office (2000, 2002, and 2003). The Smart View implementation provides this functionality:

- Imports the current page of the current data object to Excel, Word, or PowerPoint
- Exposes Financial Management and Essbase functions in Excel, Word, and PowerPoint content
- Notifies you when to upgrade to later releases of Smart View.

Smart View enables these import options:

- You can import the current page of the current data object to Word, PowerPoint or Excel as an image. After insertion, you can query the corresponding Web application to refresh the image.
- You can import an entire report with multiple report objects to Microsoft Excel.
- You can import documents to Microsoft Excel as query-ready HTML. When you export content as query-ready HTML, the current page of the current data object is converted to HTML and Oracle | Hyperion-specific formatting is removed. This enables Smart View to query the data source independent of the Web application.
- You can export documents to Microsoft Excel as formatted HTML. When you export content as Formatted HTML, the current page of the current data object is converted to HTML with the Oracle | Hyperion formatting definitions and calculated members. This formatting content prevents Smart View from directly querying the data source, but enables Oracle | Hyperion content to be leveraged by Office applications.

The following export options are supported in Web Analysis Studio.

- Export image to Microsoft Word and PowerPoint
- Export an image of the report screen to Microsoft Word, or PowerPoint.
- Export formatted HTML files to Microsoft Excel
- Export Query-ready HTML files to Microsoft Excel. Smart View should be installed to enable query-ready export.
- Export all report objects to Microsoft Excel in separate worksheets
- Export next data objects to Microsoft Excel: Spreadsheet, Chart, Pinboard, freeform Grid and SQL spreadsheet. All data object, regardless of their type, get exported as a spreadsheet.

Note: Export to Microsoft Excel report can be refreshed against a Web application, but export to Microsoft Word and PowerPoint does not support refresh.

Because Excel worksheets prevent users from entering data into read-only cells, some Excel functions such as AutoSum, F9, and some formatting functions are disabled in Smart View. Also note that Microsoft Excel, Word and PowerPoint must be installed on the computer running the Oracle's Hyperion Reporting and Analysis client.

Exporting Data Options

You can export spreadsheets, charts or pinboards to Microsoft Excel, Word and PowerPoint. The following table describes the Export Data right-click menu.

Table 2 Export Data Options

| Type | Format | Export Option | Comment |
|-----------------|-----------------|-----------------|---|
| Microsoft Excel | Fully Formatted | Selected Object | Formatted HTML, current page of selected data object. |

| Type | Format | Export Option | Comment |
|----------------------|-----------------|------------------|---|
| | | All Objects | Formatted HTML, current pages of all data objects in a report (all in one worksheet; it is not possible to split object to separate worksheets). |
| | Query Ready | Selected Object | Data object on Essbase data source; re-queries Essbase server from MS Excel, if selected data object based on Essbase data source and exports data object in Query-Ready HTML. Note: Query Ready format supports one object per worksheet in Smart View. Therefore, "All Objects" is not available for Query Ready exports. |
| | Unformatted | Selected Object | Unformatted HTML; current page of selected data object. |
| | | All Objects | Unformatted HTML; current pages of all data object in a report. |
| Microsoft Word | Image | Selected Object | Image; current page of selected data object. Note: Image format supports one image per page in Microsoft Word and PowerPoint. Therefore, "All Objects" is not available for Image exports. |
| | | Screen | Image; screen shot of the report. |
| Microsoft PowerPoint | Image | Select Object | Image; current page of selected data object. |
| | | Screen | Image; screen shot of the report. |
| File | Image | Selected Object | |
| | | Screen | |
| | Fully Formatted | Selected Object | |
| | Unformatted | Selected Objects | |
| | | All Objects | |
| Clipboard | Fully Formatted | Select Object | |
| | Unformatted | Selected Object | |

Exporting All Report Objects to Microsoft Office

- To export all report objects to Microsoft Office, right-click on a report and select **Export Data**, then **Microsoft Excel**, then **Fully-Formatted**, then **All Objects**.

Exporting a Screen to Microsoft Word or PowerPoint

- To export a screen to Microsoft Word or PowerPoint, Right-click on the report and select **Export Data**, Then select **Microsoft Word**, then select **Image**, then select **Screen**.

Note: When exporting to Microsoft Excel, using one of the three methods that populates cells of data (Query Ready, Fully-Formatted, Unformatted), Web Analysis evaluates the number of rows and columns in the data and if they are larger than the number of rows and or/columns in Excel, an error message is displayed and the document is not exported.

Exporting to the Clipboard

Web Analysis Studio can export a page of a data object from an Web Analysis document to the operating system clipboard.

- To export a page of a data object to the clipboard:

- 1 **Right-click a data object and select **Export Data**.**
- 2 **To export a page of a data object as formatted data, select **Formatted**, then **To Clipboard**.**

Note that formatted data is converted to HTML with all Web Analysis Studio formatting definitions and calculated members. This enables Oracle Hyperion Smart View for Office, Fusion Edition to leverage Web Analysis Studio functionality in supported Microsoft Office applications. The data source however cannot update or recognize formatted data generated by Web Analysis Studio.

Export Data Unformatted

Data in a spreadsheet, chart, or pinboard can now be exported unformatted to Excel, Clipboard or to a file. To access this, right click a report object and select **Export Data**, then **Unformatted**.

When exporting data to Excel using the Unformatted option (**Export Data**, then **Unformatted**, then **To Microsoft Excel**), filter dimensions with members selected are included in the Excel output. For example, if a Web Analysis document against Essbase Sample Basic has the Scenario dimension in the filter, and the member Budget is selected, the Budget member appears in the Excel output above the column headers.

Note: This feature does not apply to the Query-Ready or Formatted export types.

Export Options

You can export documents and presentations to local computers and mapped drives. All content exported from Web Analysis (both presentations and reports) is appended with extension *.apt. To export Web Analysis Studio content to Oracle's Hyperion® Shared Services, See [“Exporting Documents and Presentations”](#) on page 145.

Exporting the Current Document

- To export the current document, select **File**, then **Export**, then **Current Document**. In the Save dialog box, indicate the network location to which the file is to be saved and click **OK**.

Exporting Documents and Presentations

- To export a document or presentation:

1 Perform one:

- Select **File**, then **Export**, then **Documents**.
- Select **File**, then **Export**, then **Presentations**.

The Open dialog box is displayed. It features a selection frame that lists the current folder contents, specified by **Location**.

2 If not specified, select **Web Analysis Document** or **Web Analysis Presentation** from **Files of Type**.

3 Navigate to the document or presentation you want to open:

- In **Location**, type the path to the repository folder whose contents you want displayed, and press **Enter**.
- In **Location**, click the drop-down arrow and select from the location series.
- When you navigate to another folder, you can click **Back** to return to the previous folder.
- Similarly, you can click **Forward** to display the next folder.
- Click **Up** to display the contents of the parent folder in the selection frame.
- Click **Favorites** to jump to the Favorites folder of the current user.
- Click the **Favorites** list to jump to the Favorites folder of groups.
- Click **Home** to jump to and display the contents of the current Home folder in the selection frame.

As you navigate, the selection frame lists the files and folders indicated by **Files of Type**.

4 Select a document or presentation:

- To select one document from the selection frame, click the document name or icon.
- To select a series of documents from the selection frame, click a document name and press and hold **Shift** while selecting another document name. The first selection, the last selection and all documents in between are selected.
- To select multiple documents, not necessarily in a series, hold down **Ctrl** while clicking document names in the selection panel.
- To deselect items, click outside the Name column or on empty space.
- Double-click to select and dismiss the Open dialog box.

5 Click **OK**.

The Save dialog box is displayed. It features a selection frame that lists the contents of the current folder, specified by **Look in**.

6 Navigate to the network location where files are to be saved:

- Click **Up** to display the contents of the parent folder in the selection frame.
- Click **Home** to jump to and display the contents of the current Home folder (set in preferences) in the selection frame.
- Click **Look in** to list mapped drives and network folder locations. Click a location name to display its contents in the selection frame.
- Click the **Create New Folder** icon to create a folder at the current location.

7 Click to select a folder location in the selection frame.

8 **Optional:** Specify a name for the exported file in **File name**.

9 Click **Save**.

The files selected in the Open dialog box are converted to Web Analysis document definitions and stored at the location specified by the Save dialog box.

Note: The .apt file suffixes are dropped when you export to a folder that has a period (.) in it. To guard against this issue, do not use periods in folder names.

Saving As HTML

➤ To convert a document to HTML:

1 Select **File**, then **Save As HTML**.

The Save As HTML menu is displayed.

2 Select one:

- **Current Document**
- **Presentation**

The Save as HTML dialog box is displayed.

- 3 Specify a file name and a location for saving the output file, and click **Save**.

E-mailing Document Links

You can e-mail hyperlinks to the URL of the current document.

- To send a document link of the current document by e-mail:

- 1 Select **File**, then **E-mail As Link**.

The E-mail As Link submenu is displayed.

- 2 Select one:

- **EPM Workspace**—Presents the current document in the EPM Workspace.
- **Web Analysis Studio**—Presents the current document in Web Analysis Studio.

The E-mail dialog box is displayed.

- 3 Enter the e-mail address of recipients under **Add and Remove**.

- 4 Click **Add**.

The E-mail address is displayed in the Recipients' E-mail Address box.

- 5 Enter your e-mail address in **Sender's E-mail Address**.

- 6 Replace the default subject string in **Subject**.

The Body group box is displayed the document link URL of the current document.

- 7 Click **OK**.

11

Printing

In This Chapter

| | |
|--------------------------------------|-----|
| Printing Options | 149 |
| Print Dialog Page Tab | 150 |
| Print Dialog Header/Footer Tab | 150 |
| Printing | 154 |
| Printing all Open Reports | 154 |
| Print Preview | 155 |

Printing Options

Three printing options:

- **Print Screen** — prints the content area (the current display)
Because documents can contain multiple data objects, Print Screen does not specify OLAP pages. To include OLAP pages or object-specific document summaries, use Print Selected Object.
- **Print Selected Object** — prints the specified OLAP pages of the current data object
- **Print All Objects** — prints all data objects in the current Web Analysis document.

The output format is similar to the format of Print Selected Object. Page members can be printed for all report objects for which page members are defined.

Output options:

- Print the content area to the default printer
- Print the content area to a PDF output file
- Print the content area to a JPG output file
- Print the current data object to the default printer
- Print the current data object to a PDF output file
- Print all objects to the default printer
- Print all objects to the PDF output file
- Print Preview

The Print dialog box features:

- **Page tab** — Specifies the print output, layout orientation, how to break the output over multiple pages, and whether a document summary page is included.
- **Header/Footer tab** — Defines custom headers and footers for print output.

Selecting the "Allow print settings to be saved with document" option at the bottom of these tabs enables you to save print specifications with the document. Otherwise, print specifications persist only as long as the document is open during the current session.

Print Dialog Page Tab

The Page tab specifies print output, layout orientation, how to break the output over multiple pages, and whether a document summary page is included:

| Control | Description |
|--|--|
| Print To | |
| Printer | Directs print output to the default printer. |
| PDF | Saves print output as a PDF file. |
| JPEG | Saves print output as a JPG file. |
| Orientation | |
| Portrait | Prints the document with a portrait orientation. |
| Landscape | Prints the document with a landscape orientation. |
| Scale | |
| __ page(s) wide __ page(s) tall. | Fit to page printing. Enables you to determine how document content is broken down into print job pages. |
| Summary Page | |
| Include a document page | Automatically inserts a print summary into the printer output when checked. |
| OLAP Pages | |
| Page Selection Panel | In Print Current Document context, specifies the OLAP page axis dimensions to print. |
| Allow print settings to be saved with document | Saves print specifications when the document is saved. |
| Print Preview | Displays the Print Preview panel. |

See also [Print Dialog Header/Footer Tab](#).

Print Dialog Header/Footer Tab

The Header/Footer tab defines custom headers and footers for print output.

| Control | Description |
|--|--|
| Table Headers | |
| Include row and column headers on all pages. | Automatically inserts row and column headers on all pages when checked. |
| Header | |
| Font | Opens the Font Properties dialog box, enabling you to set font properties for the current text selection. |
| Insert | Adds a dynamic text label to the header at the location in the string specified by the cursor. See “Dynamic Text Labels” on page 151 . |
| Clear | Deletes the content of the Header text box. |
| Header Text box | Adds a header text string. |
| Footer | |
| Font | Set font properties for the current text selection. |
| Insert | Adds a dynamic text label to the footer at the location in the string specified by the cursor. See “Dynamic Text Labels” on page 151 . |
| Clear | Deletes the content of the Footer text box. |
| Footer text box | Adds a header text string. |
| Allow print settings to be saved with document | Enables you to save print specifications when the document is saved. |
| Print Preview | Displays the Print Preview panel. |

See also [Print Dialog Page Tab](#).

Dynamic Text Labels

You can add dynamic text labels to headers and footers, using the Insert button on the [Print Dialog Header/Footer Tab](#). Dynamic text labels update themselves as strings are changed in the repository.

| Dynamic Text Tag | Default Tag | Inserts: |
|----------------------|--------------|---|
| Database Note | <<dbnote>> | Database note in the label. |
| Cell Reference | <<cell 0,0>> | Cell reference string in the label. |
| Page | <<page>> | Page dimension name in the label. |
| Filter | <<filter 0>> | Filter member name in the label. |
| Document Description | <<rd>> | Document description string in the label. |
| Document Name | <<rn>> | Document name string in the label. |

| Dynamic Text Tag | Default Tag | Inserts: |
|------------------|---------------------|---|
| Date/Time | <<date,MM-dd-yyyy>> | Date/time string in the label. |
| Connection Name | <<cn>> | Database connection name string in the label. |
| Username | <<username>> | User name string in the label. |
| UserID | <<userid>> | User ID string in the label. |

Note: Because custom documents can contain multiple data objects, dynamic text labels reference the current data object (the spreadsheet, chart, pinboard, or SQL spreadsheet with the yellow border).

Creating Dynamic Text Labels

- To create dynamic text labels, click the text string where the label is to be added, and select the dynamic text label from **Insert**.

After dynamic text labels are placed in the text box, you can edit the tag to display additional information.

Fixed References

Because dynamic text labels change as focus is shifted in composite documents, you may want to fix the dynamic reference. Tags can be associated with specified data sources using these modifications:

| Dynamic Text Tag | Default Tag | Fixed Reference |
|------------------|--------------|------------------------------|
| Connection Name | <<cn>> | <<cn DataSourceName1>> |
| Cell Reference | <<cell 0,0>> | <<cell DataSourceName1,0,0>> |
| Filter | <<filter>> | <<filter DataSourceName1,0>> |
| Pages | <<page>> | <<page DataSourceName1>> |
| Database Note | <<dbnote>> | <<dbnote DataSourceName1>> |

Note: It is not possible to specify a fixed references for a page dimension member.

Time Format Syntax

Time Format strings specify the format of the dynamic date/time label. The count of the ASCII letter pattern determines the format used.

| ASCIISymbol | Meaning | Type | Example |
|-----------------------|----------------------|---------------|-----------------------------|
| G | Era | Text | AD |
| y | Year | Number | 2002 |
| M | Month in Year | Text & Number | July & 07 |
| d | Day in Month | Number | 10 |
| h | Hour in am/pm (1-12) | Number | 12 |
| H | Hour in Day (0-23) | Number | 0 |
| m | Minute in Hour | Number | 30 |
| s | Second in Minute | Number | 55 |
| S | Millisecond | Number | 978 |
| E | Day in Week | Text | Tuesday |
| D | Day in Year | Number | 189 |
| F | Day of Week in Month | Number | 2 (meaning 2nd Wed in July) |
| w | Week in Year | Number | 27 |
| W | Week in Month | Number | 2 |
| a | am/pm marker | Text | PM |
| k | Hour in Day (1-24) | Number | 24 |
| K | Hour in am/pm (0-11) | Number | 0 |
| z | Time Zone | Text | Pacific Standard Time |
| ' (apostrophe) | Escape for Text | Delimiter | |
| " (two single quotes) | Single Quote | Literal | ' |

When four or more Text type letters are used, the full form is provided.

When three or more Text & Number type letters are used, text is provided. When only one or two letters are provided for this type, the number is provided.

Numbers use the minimum number of digits. Year can be truncated to two digits. Shorter numbers are zero-padded.

All other characters are used as quoted text strings.

Examples

"yyyy.MM.dd G 'at' hh:mm:ss z" returns 1996.07.10 AD at 15:08:56 PDT

"EEE, MMM d, 'yy" returns Wed, July 10, '96

"h:mm a" returns 12:08 PM

"yyyyy.MMMMM.dd GGG hh:mm aaa" returns 1996.July.10 AD 12:08 PM

Printing

Use this option to print a single report. To print several open reports at one time see [“Printing all Open Reports”](#) on page 154.

► To print:

1 Select **File**, then **Print** to display the **Print** dialog box.

2 Select one from the **Context** area:

- Print Screen — prints the content area.
- Print Selected Objects — prints all data objects in a document.

Context determines the scope of the print job. Numerous print options are available on the Page and Headers/Footers tab.

3 On the **Page** tab, select one from **Print To**:

- Printer — sends the print job to the default printer.
- PDF File — sends the print job to a PDF output file.
- JPG File — sends the print job to a JPG output file (screen only).

Select other print options on the **Print Dialog Page** tab and **Print Dialog Headers/Footers** tab.

4 Click **Print**. Depending on your **Print To** selection, a dialog box is displayed.

5 Click **OK**.

Printing all Open Reports

You can print all open reports at one time and use the print settings that have previously been saved with each report. Conversely, you can apply new print settings to all documents.

► To print:

1 From the **Navigation** bar, select and open reports to print.

2 Select **File**, then **Print All**.

3 Select one from the **Context** area:

- Print Screen — prints the content area.
- Print Selected Objects — prints the current data object of the current document.
- Print All Objects — prints all data object in a document.

Context determines the scope of the print job. Numerous print options are available on the Page and Headers/Footers tabs.

Note: When Print Selected Object or Print All Objects are selected, the OLAP Pages section is enabled. When OLAP Pages are available in prior releases, you can set summary page information in the Summary Page section.


- 4 Select **Utilize Saved Settings** to use the Print settings that have been saved with each report through the Allow print setting to be saved with document check box, or clear the check box to set new Print settings that will apply to all documents.
- 5 On the **Page** tab, select one from **Print To**:
 - Printer — sends the print job to the default printer.
 - PDF File — sends the print job to a PDF output file.
- 6 Click **Print**.

Depending on your **Print To** list selection, a dialog box is displayed:

 - Operating System Print dialog box — to select a network printer.
 - Operating System Save dialog box — to select a network location.
- 7 Click **OK**.

Print Preview

► To preview the print job before printing:

- 1 Select one:
 - Print from a data object shortcut menu.
 - Click .
 - File, then Print.

The Print dialog box is displayed.
- 2 Click **Print Preview**.

The Print Preview dialog box is displayed.
- 3 **Optional:** To magnify or minimize the print preview, select **Zoom** list and select a size ratio option (25%, 50%, 75%, or 100%).
- 4 Click **OK** to return to the Print dialog box.

In This Chapter

| | |
|--|-----|
| Database Connections | 157 |
| Creating OLAP and Oracle Hyperion Database Connections | 158 |
| Database Connection Properties | 161 |
| Measures Formatting | 162 |
| Integrating OLAP and Relational Data | 162 |
| Creating Relational Drill-Through | 163 |
| Essbase Database Connections | 165 |
| Financial Management | 168 |
| SAP BW | 171 |
| Creating SAP BW Database Connections | 173 |
| SQL Server Analysis Services | 174 |
| Relational Access | 176 |
| Controlling Query Result Set Size | 177 |
| Relational Database Connections | 177 |
| Creating Relational Database Connections | 180 |
| Editing Database Connections | 184 |
| Changing Database Connections for Report Objects | 184 |

Database Connections

Database servers typically use a server name, application name, and database name in the creation of unique identifiers. The nature of these identifiers makes database references less portable. Web Analysis Studio uses user-friendly database aliases instead of long identifiers. Not only are database connection names easier to remember and more economical to employ, they enable the database to be maintained on multiple servers.

In short, database connections are portable files that define the terms, conditions and method for connecting to a data source.

System requirements vary for RDBMS (see the Oracle Hyperion Enterprise Performance management System Installation Start Here Guide), and you must compose a database connection string and provide log on credentials to navigate your relational hierarchy. You can also connect to level 2 or level 4 JDBC RDBMS using other relational data objects (SQL Spreadsheet, freeform grid, relational drill-through and Integration Services drill-through).

The View Pane Information Panel tab displays the database connection used by the current data object. The Information panel features two database connection segments:

- The Database segment displays the database connection name for the current data object.
- The Database User Name segment displays the user ID by which access to the database connection is granted.

Database Connections

Database connections are stored as repository files and adhere to most file management conventions. You can only see the database connections to which you are granted access. Various permissions are needed to read, write, edit, and change database connection properties.

Database Connection Access and Document Permissions

It is possible to distribute a document or presentation to a user that requires database connections he or she cannot access. Document access is independent of database connection access.

Database connection permissions withholding access prevent access to only one database connection file. You are free to compose another database connection to this data source, or to compose a database connection to an alternate data source. You can leverage the document definition independently of a database connection.

See [“Setting File Properties” on page 43](#).

User and Group Permissions

You can access database connections assigned directly to you or database connections assigned to a group to which you belong.

When documents are assigned to a group, the database connections that the document uses must also be assigned to the group. Otherwise, group members can access the document, but they cannot access its data values (unless they have individual user access).


To mitigate the risk of conflicting permissions, store documents with the database connections they reference. Whenever possible, distribute documents and database connections to groups. It is easier to set permissions for all files in a folder, and all users in a group than it is to manage permissions for individual files and individual users.

Creating OLAP and Oracle | Hyperion Database Connections

The database connection wizard guides you through the creation of OLAP and Oracle | Hyperion database connections. You must know the name of your server, application, and database, and have log on credentials.

➤ To create a document using the document creation wizard:

1 Perform one:

- Select **File**, then **New**, then **Database Connection**.
- Click , and select **Database Connection**.

2 From Database Connection, select a database connection:

- **Essbase**
- **Financial Management**

There is an **SAP BW and Relational** option. See [“SAP BW Features Available in Web Analysis Studio” on page 173](#) and [“Creating Relational Database Connections” on page 180](#).

The Process bar displays steps for creating a database connection: **Server**, **Database**, **Formatting**, and **Drill-through**. On the **Server** page, you must enter the server name of your data source server, and the log on credentials used to access it.

3 In the Database Server text area, enter the name of the data source server.

4 In the Logon Information group, enter a user ID and password for accessing the data source server.

The current user ID and password are entered by default, in case the data source server uses credentials that match.

5 Optional: If you want to save the credentials, select **Save User ID and Password**.

6 Click Next.

Clicking **Next** queries the data source for application and database information. The content area displays the **Database** page.

7 From the list of Available Databases on the right, select a database.

Databases are listed by application. When you select the database, the application and database name are loaded into the text area on the left.

Note that **Next** and **Finish** are enabled at the lower right of the content area. The last two steps of the database connection wizard are optional. If you do not want to specify Measures Formatting or Relational Drill-through connectivity, click **Finish**.

8 Select one:

- Click **Next**, to specify Measures Formatting or Relational Drill-through connectivity.
- Click **Finish**, to skip these optional steps. If you click **Finish**, skip to step 12.

Clicking **Next** queries the specified database for dimension information. The content area displays the **Formatting** page.

9 Optional: To specify measures formatting for the database connection, select a dimension from **Formatted Dimension**.

10 Optional: Specify a Measures formatting definition, by selecting from these options:

| Formatting Option | Description |
|--|---|
| Formatted Dimension | Specifies the dimension to which the formatted member belongs. |
| Advanced Member Selection | Specifies the single member or single advanced member selection to which the formatting definition is applied. |
| Leading and Trailing Formatting | |
| Currency Symbol | Inserts the currency formatting symbols into the Positive Prefix and Negative Prefix text boxes. |
| Positive Prefix | Enters character to precede positive numeric values. |
| Positive Suffix | Enters character to follow positive numeric values. |
| Negative Prefix | Enters character to precede negative numeric values. Warning: The minus sign (-) is the default prefix. Deleting the default prefix without replacing it causes negative values to display positively. |
| Negative Suffix | Enters character to follow negative numeric values. |
| Numeric Formatting | |
| Grouped Thousands | Displays numeric digits as grouped by thousands. |
| Maximum Decimals | Indicates the maximum number of decimal places to display. |
| Minimum Decimals | Indicates the minimum number of decimal places to display. |
| Scale | Enables abbreviated value by tens, hundreds, thousands, ten-thousands, hundred-thousands, millions, and billions. |
| Use Negative Color | Indicates that negative numbers are signified by a selected color. |
| Select Negative Color | Enables you to select the color representing negative values. |
| Replace Missing With | Replaces missing values with a text string or zero as indicated by the option. |
| Font | |
| Header Font | Displays the Font Properties dialog box, for specifying Font family, point size, style, and color for the dimension header label. |
| Data Font | Displays the Font Properties dialog box, for specifying Font family, point size, style, and color for the cell data values. |

Note that **Next** and **Finish** are enabled at the lower right of the content area. The last step of the database connection wizard is optional. If you do not want to specify Relational Drill-through connectivity, click **Finish**.

11 Select one:

- Click **Next**, to specify Relational Drill-through connectivity.
- Click **Finish**, to skip this optional step.

If you click **Next**, the content area displays the **Drill Through** page. See [“Creating Relational Drill-Through” on page 163](#).

After clicking **Finish**, the **Save As** dialog box is displayed. It prompts you to navigate to the repository location where you would like the database connection file saved.

12 Navigate to the folder into which you want to save your database connection file:

- Click **Up** to display the contents of the parent folder in the selection frame.
- Click **Home** to jump to and display the contents of the current Home folder (set in preferences) in the selection frame.
- In **Location**, type the path to the repository folder whose contents you want displayed, and press **Enter**.
- In **Location**, click the drop-down arrow and select another location from the repository drop-down list.
- When you navigate to another folder, you can click **Previous** to return to the last folder displayed in the selection frame.
- Similarly, you can click **Next** to display the next folder in the location series.

As you navigate, the selection frame lists the files and folders indicated by **Files of Type**.

13 Optional: When you reach the location where you want to save the file, enter a name for the database connection in **Filename.**

14 Click **OK.**

Your database connection file is saved to the specified repository location.

Database Connection Properties

Database connection properties are set when the database connection is defined. You define database connections using the database connection wizard. Database connection properties include:

- Servername
- Log on credentials
- Application and database names
- Measures formatting
- Relational drill-through connectivity

It is important to differentiate properties.

- Database Connection properties—Define the terms, conditions, and method for connecting to a data source. They are set using the database connection wizard.
- File Properties—Determine identification and access to the database connection. They are set using the File Properties dialog box.
- Data Object Properties—Specify which database connection is used by the data object.
- Preferences—Specify database connection options that are set for each user (such as log on credentials, alias table, POV definitions, and personal variables).

See also [“Measures Formatting” on page 162](#), [“Creating OLAP and Oracle | Hyperion Database Connections” on page 158](#), [“Integrating OLAP and Relational Data” on page 162](#), and [“Creating Relational Drill-Through” on page 163](#).

Note: If you edit the Server Name, Application Name, or Database Name parameter values, you cannot load documents created using parameter values that differ. A better practice is to create a database connection with the desired parameter values.

Measures Formatting

Measures formatting enables you to globally format one dimension used by an OLAP database connection. This global formatting includes leading and trailing characters, numeric formatting of numeric dimension values, and header and data formatting.

Measures formatting options differ from those of data formatting and default formatting preferences. See [“Formatting Order of Precedence” on page 92](#).

You can define measures formatting using an explicit member selection or advanced member selection. Using advanced member selection makes the measures formatting dynamic. As members are added deleted and changed in the database, the formatting maintains itself and does not become obsolete.

See [“Creating OLAP and Oracle | Hyperion Database Connections” on page 158](#).

Integrating OLAP and Relational Data

You can construct liaisons between OLAP and relational data sources, typically called relational drill-through. After relational drill-through is configured, you can drill from the dimension bottom (level 0) of the OLAP database to specified relational data.


Relational drill-through is a client-based integration solution comparable to the server-based Integration Services drill-through.

The Relational Drill-Through dialog box is a graphical user interface for creating SQL relational database queries. You can use complex SQL syntax to specify table joins, and select and order by clauses.

Note: To support a broad array of JDBC relational data sources, relational drill-through does not support queries by levels, generations, or previously selected members.

Relational drill-through is configured as a database connection property of an OLAP database connection. You can set database connection properties through the database connection wizard:

- Select **File**, then **New**, then **Database Connection**, then **Analytic Services or Financial Management**.

- Click , and select **Database Connection**, then **Analytic Services** or **Financial Management**.
- In the **View Pane Browser** tab, right-click an OLAP database connection in the **Selection** frame and select **Edit**. The database connection wizard for the selected database connection is displayed. Relational drill-through is set by the last step in the wizard process.

Defining Relational Drill-through

Upon accessing the **Modify Relational Drill-through Connection** dialog box, you complete these tasks in the creation of relational drill-through navigation:

1. Define a JDBC RDBMS connection, using the **Configure JDBC Driver** dialog box.
2. Test the connection.
3. Indicate the relational database table name.
4. Update the **Columns** list.
5. Map relational columns to dimensions in the OLAP database.
6. Indicate whether to pass filter dimensions or page dimensions and a row limit (if).
7. Click **Apply**.

For instructions for creating relational drill-through navigation, See [“Creating Relational Drill-Through” on page 163](#).

Controlling Query Result Set Size

Query governors vary for relational access methods.

Custom document SQL spreadsheets and relational drill-through methods set query governors in the course of creating the SQL query or relational drill-through definition.

When drilling from OLAP to relational data, passing only the drilled OLAP dimension member to the relational data source may result in a large query result set. To focus and diminish the query result set, you can pass page and filter dimensions specified in the OLAP document.


Other relational access methods rely on the `Webanalysis.properties` file to limit the query result set.

Creating Relational Drill-Through

Users with privileges can create relational drill-through connections using the **Database Connection** wizard. You must know the name of the relational database table that you intend to access before beginning.

► To create a relational drill-through definition on an OLAP database connection:

1 Perform one:

- Select **File**, then **New**, then **Database Connection**, then **Analytic Services** or **Financial Management**.
- Click , and select **Database Connection**, then **Analytic Services** or **Financial Management**.
- In the View Pane **Browser** tab, right-click an OLAP database connection in the Selection frame and select **Edit**. The database connection wizard for the selected database connection is displayed.

The first two options create a database connection. The last option enables you to define relational drill-through on an OLAP database connection.

The Process bar displays the steps for creating a database connection: **Server**, **Database**, **Formatting**, and **Drill-through**.

This procedure describes the creation of a relational drill-through definition on an OLAP or Oracle | Hyperion database connection. See also [“Creating OLAP and Oracle | Hyperion Database Connections” on page 158](#).

2 On the Server, Database, and Formatting page, click Next until the Drill-through page is displayed.

Do not click **Finish**, or the wizard close without defining a drill-through connection.

3 On the Drill-through page, select Define Relational Drill-through Connection.

The **Configure JDBC Driver** dialog box is displayed. To successfully create a JDBC RDBMS connection, you must know the kind of relational data source you are accessing, the parameters needed to connect to it, and have a user name and password that supports connectivity.

4 Select one from Driver Type.

- **IBM DB2**
- **Microsoft SQL Server**
- **Oracle**
- **Teradata**
- **Other**

Your JDBC driver selection populates the **Database Connection String** text area with a relational database connection string. If you selected **Other**, you must define your own JDBC connection string.

5 In Database Connection String, supply values for variables.

Depending on the driver type, there are variables for host name, database name, port, and DSN. You must replace the brackets and the variable.

6 Enter a JDBC user name in Username.

7 Enter a password for the user name in Password.

8 Click Test Connection to verify connectivity.

If the connection fails, repeat steps 6 through 10 until you can establish successful relational database connectivity. Make sure you remove the brackets from string variables.

9 After you connect, close the message and click OK.

The Modify Relational Drill-through Connection dialog box is displayed. With this dialog box, you can redefine a JDBC RDBMS connection, test the connection, identify a relational table, specify a column, and finally map the column to an OLAP dimension.

10 Enter a relational database table name in From.

11 Click Update Columns.

Column names for the specified table are displayed in the Column Name list at the bottom of the dialog box.

12 Designate the OLAP dimensions from which you connect to these table columns. To do this, you must understand the relationship between OLAP and relational data:

- a. Click a cell in the Related Dimension column opposite a relational column name to which you would like to connect OLAP data.

The clicked cell presents a drop-down list with the dimension list of the OLAP database connection.

- b. Click to select an OLAP dimension.

Repeat the process of mapping relational database columns and OLAP dimensions until your mappings are complete.

13 Optional:

- Click **Pass Pages** to maintain the current OLAP pages as you drill into relational data.
- Click **Pass Filters** to maintain the current OLAP filters as you drill into relational data.
- Set row limits for the query result set in the "Max rows to return" text box. This protects server and network resources from being consumed unintentionally by very large query result sets.
- Specify SQL Select, Where, and Order By clauses to narrow the relational query result set.

14 Click OK.

15 Click Finish.

Your relational drill-through definition is saved as a database connection property.

Essbase Database Connections

These Essbase features are extended through Web Analysis Studio:

Restrict Data

The Restrict Data Analysis Tool enables you to narrow the return set by requiring data values to be relevant to rules and operands. Data can be filtered by comparison to another column or by fixed limits on one column.

See [“Restricting Data” on page 122](#).

Retrieve Only Top/Bottom

The Retrieve Only Top/Bottom Analysis Tool leverages Essbase sorting and ranking to control the size and order of an OLAP query result set. This protects the network server from transmitting, and the client from processing, large result sets.

See [“Retrieve Only Top/Bottom” on page 124](#).

Edit Data

Users with permissions can edit data values and write edits back to the Essbase database. After edits are applied, you can recalculate the database and measure the impact of changed values.

See [“Editing Data Values” on page 243](#)

Suppress Missing Rows, Zeros, and Shared Members

Web Analysis Studio leverages Essbase to suppress missing rows, zeroes and shared members from the query result set. This prevents irrelevant information from being returned, reduces network traffic and increases query speed.

Note: The design in Suppress Shared Member functionality only works if selecting one of the following: `Select Dim Bottom, Also Select Level, Also Select Generation..`

Label Mode and Alias Tables

Label mode enables you to select whether a dimension member is listed by ID number, description, or both. Label mode options are database-specific, and can be set for database connections, documents, and dimensions.

Although the label mode indicates whether the description or ID number is used, it is Essbase alias table definitions that provide the displayed value.

See [“Alias Tables” on page 263](#).

Essbase Drill Settings

Web Analysis Studio uses Essbase features to provide customizable drilling navigation in three ways:

- The nature of the hierarchical navigation
- Whether the current dimension members are replaced or augmented
- Whether the drilled dimension member is replaced or augmented

See [“Drilling Variations” on page 86](#).

LROs

Essbase LROs enable user to annotate data values by associating external media with a cell. LRO types include:

- Text documents
- File Attachments
- URLs

See [“Related Content Definitions” on page 245](#).

Relational Drill-through

Web Analysis Studio enables you to drill through to related relational data from the lowest level of the Essbase outline, by defining a link on Essbase database connections. You can pass pages, filters, and row limits to focus and control the relational query result set.

See [“Defining Relational Drill-through” on page 163](#).

Integration Services Drill-through

Integration Services enables you to organize, format, and present relational data as an OLAP cube in Essbase. Web Analysis Studio you to access Integration Services document data through Essbase LROs by drilling on cells marked for Integration Services drill-through.

See [“Integration Services Drill-Through” on page 244](#).

Essbase Advanced Member Selection

In dimensions with large member sets, you can easily define selections with the Dimension Browser shortcut menu. Right-clicking dimension member names enables selection by familial relationship and database-specific selection options.

See [“Advanced Member Selection” on page 61](#).

Attribute Dimensions and Attribute Calculations

Essbase can store dimension member names, locations, and relationships, and characteristics about members. Essbase does not store attribute dimensions as part of the OLAP cube, but instead dynamically calculates them upon request. Attribute dimensions are displayed in dimension hierarchies and used in calculations in the same manner as dimension members, despite being stored differently.

Essbase Metadata Security and Web Analysis Document Design

If metadata security is established, when you create Web Analysis documents against an Essbase cube, adhere to this guideline:

If report member selections contain dimensions that are specified in a METAREAD filter, use dynamic member selections (for example, Children of East) and use only members that users can access. Users accessing a Web Analysis document that contains members that they cannot access receive an Unknown Member error.

For example, If a METAREAD filter applies to the Market dimension and @Children(East) is specified, when users try to open the Web Analysis document with the METAREAD filter, Unknown Member is displayed, because the users cannot access West, South, and Central.

Financial Management

These Financial Management features are extended through the Web Analysis Studio graphical user interface:

- Org by Period
- Financial Management-specific Advanced Member Selection
- Financial Management Cell Text - Related Content
- Financial Management Line Item Detail - Related Content
- Financial Management Advanced Member Selection Methods
- Financial Management User Defined Fields
- Display Entity Currency

Financial Management Related Content

The Related Content dialog box indicates links to previously configured related content and applications.

When Linked Reporting Object Indicators are enabled, blue triangles are displayed in the spreadsheet cells containing links to related content. Right-clicking these cells and selecting Related Content, displays the Related Content dialog box.

These Financial Management features are accessed as related content:

Cell Text

Web Analysis Studio users can launch Cell Text notes stored in the Financial Management data source. The text string is read-only.

Line Item Detail

Web Analysis Studio users can launch Line Item Detail spreadsheets stored in the Financial Management data source. Line Item Detail information is displayed in a read-only relational spreadsheet.

Recalculating Financial Management

Changes to Cell Text and Line Item Detail items are not displayed in Web Analysis Studio until Financial Management is recalculated and the changes registered.

Org By Period

Financial Management Organization by Period functionality allows an organization's latest consolidation structure to coexist with past structures in one application.

Dimension member hierarchies can be consolidated differently during different periods. Organizational structures can change for many reasons, including acquisitions, disposals, mergers, and reorganizations.

Web Analysis Studio users can access Org by Period functionality when Org by Period is configured and set on the Financial Management server.

When querying Financial Management database connections configured with Org by Period, the Data Layout Options button displays an Org by Period menu item. The Org by Period dialog box offers you an interface for enabling Org by Period and selecting three corresponding dimension members.

See "Managing Metadata" in the Oracle Hyperion Financial Management Administrator's Guide.

Financial Management Advanced Member Selection

In dimensions with large member sets, you can easily define selections with the Dimension Browser shortcut menu. Right-clicking dimension member names enables selection by familial relationship and database-specific selection options. See ["Advanced Member Selection" on page 61](#).

Financial Management offers a smaller set of advanced member selection methods than its Essbase counterpart. Typical Financial Management-specific advanced selection methods include:

| Method | Description |
|---------------------------------|---|
| All Members | Selects all dimension members. This member selection method is specific to Financial Management. |
| Select Dim Top | Selects the highest ancestor. |
| Select Dim Bottom | Selects the lowest descendants. |
| Also Select Descendants | Selects the currently selected member and its descendants. |
| Member List | Displays the Member List dialog box, for selecting predefined lists of dimension members. This member selection method is specific to Financial Management. |
| User Defined Fields 1, 2, and 3 | Displays the User Defined Field dialog box, enabling you to select dimension members with User Defined Field values. |
| Search | Displays the Search dialog box, used to locate dimension members. |

User Defined Fields

User Defined Fields are typically defined only for Account, Scenario, Entity, and custom dimensions, and they are limited to 20 characters.

You can compose compound selection statements using values that differ for a User Defined Field (for example, User Defined Field 1= West AND User Defined Field 1= East.).

You cannot define a User Defined Field with an empty string as a value.

Display Entity Currency

Financial Management stores currency metrics in the Value dimension, and as an attribute of the Entity dimension. This enables you to query the data source using a selected currency value, or a default currency value.

When using an Financial Management data source with defined Entity dimension currency information, you can enable the Display Entity Currency option, to append the Entity dimension members with your default currency value. This can be set before querying using Data Layout options, after querying using the Data Display shortcut menu, and for all subsequently created documents using OLAP Server preferences.

Financial Management Conventions

Financial Management supports 12 dimensions in outlines. Four are custom and eight are predefined: Period, View, Entity, Account, ICP, Scenario, Value, and Year.

No Drill To Top

If you query Financial Management, you cannot drill to top as you can when querying Essbase. Financial Management tracks parent-child relationships differently than Essbase. The Financial Management hierarchy enables multiple consolidations, which enables the existence of multiple parents for child.

No Edit Data

You cannot write data back to the Financial Management data source, as you can in Essbase.

Adding and Deleting Dimension Members

You must click the Reload button before dimensions with added or deleted members can be displayed.

New Financial Management Databases

Current sessions of Web Analysis Studio cannot interact with Financial Management data sources added during the course of the session. Only those data sources operating when the Web Analysis Studio session is established can communicate with Web Analysis Studio. To connect to new Financial Management databases, log off and log on again.

Deleted Financial Management Users

After you establish a Web Analysis Studio session with Financial Management, your access is not revoked under the sessions ends (that is, until you log out). This applies even when your user ID is deleted server-side.

SAP BW

SAP BW Pre-requisites

To access SAP BW data sources you must first install SAP JCo driver on the Web Analysis Studio server. After installation, you must provide these SAP Logon parameters to create an SAP BW database connection:

- Host name or IP address of the SAP BW server
- Router string
- User name and password
- Client number
- System number
- Language

SAP BW Conventions

SAP BW conventions differ from other data sources. For example, Level 0 is the highest ancestor in SAP, as opposed to the lowest descendant in Essbase. SAP Member Properties are analogous to Essbase attribute dimensions.

Reporting and Analysis supports these SAP InfoProviders:

- InfoCubes
- ODS Objects
- InfoSets
- BEx Query Cubes
- Multiproviders

SAP BW Advanced Member Selection

In dimensions with large member sets, define selections with the Dimension Browser shortcut menu. Right-clicking dimension member names enables selection by familial relationship and database-specific selection options. See [“Advanced Member Selection” on page 61](#).

| Option | Selects |
|-------------------------|--|
| All Members | All dimension members. This member selection method is specific to Financial Management. |
| Select Dim Top | The highest ancestor, or in multiple hierarchies all top level ancestors. |
| Select Dim Bottom | All lowest level descendants. |
| Also Select Descendants | The currently selected member and its descendants. |
| Select Parent | The direct parent of the currently selected member. |
| Also Select Ancestors | The currently selected member and its ancestors. |
| Also Select Children | The currently selected member and its children (one level below). |
| Also Select Siblings | The currently selected member and members on one level with a shared parent ancestor. |
| Also Select Level | The currently selected dimension member and all dimension members on one level. |
| Select At Level | All members at a specified level of the dimension hierarchy. You can specify the level by name or number. |
| Also Select Previous | A variable number of previous members from the right-clicked member's level. Uses the MDX LAG command to indicate the number of previous members to return. |
| Also Select Next | A variable number of next members from the right-clicked member's level. Uses the MDX LEAD command to indicate the number of subsequent members to return. |
| Date Time Series | Time dimension members based on time definition criteria. SAP BW does not return aggregated values for DTS selections, and returns only the members that satisfy the criteria. |

| Option | Selects |
|-----------------------------|--|
| Select Top/Bottom | <p>A variable number of dimension members based on their rank by another specified dimension member.</p> <p>You can select the top values or the bottom values. Rank can be calculated by percentage, sum, or count. Sum uses a threshold value to select dimension members up to and including the value that exceeds the threshold.</p> <p>Result sets may differ from dimension browser preview, due to the influence of custom filter selections on the query.</p> |
| Filter on Member Properties | Displays the Member Properties dialog box, for selecting a subset of members by their SAP BW member property values. |
| Find in Tree | Locates dimension members in large dimensions. Find In Tree expands the dimension hierarchy, but does not add found members to the Selection list. |

SAP BW Features Available in Web Analysis Studio

Web Analysis Studio extends these SAP BW features:


- SAP BW Variables
- SAP BW Period To Date
- SAP BW Top Bottom
- SAP BW Member Properties
- Searching for SAP BW Characteristic Values
- SAP BW Currency Conversion
- SAP BW Unit of Measure Conversion

Creating SAP BW Database Connections

Before beginning, you must know the host name of your server or IP address, router string, client number, system number, language, catalogue, and cube, and have log on credentials.

► To create a document using the document creation wizard:

1 Perform one:

- Select **File**, then **New**, then **Database Connection**, then **SAP BW**
- Click , and select **Database Connection**, then **SAP BW**.

The Process bar is displayed the steps for creating an SAP BW database connection: **Server**, and **Database**. The content area displays the **Server** page.

2 In **SAP BW Server**, enter the host name or IP address of the server.

3 In **Router String**, enter the SAP BW server router string.

4 Enter a **user ID**, **password**, **client number**, **system number**, and **language**.

The current user ID and password are entered, in case known server credentials are used.

5 Optional: To save these credentials, select **Save User ID and Password**.

6 Click Next.

Clicking Next queries the data source for catalogue and cube information. The content area displays the **Database** page.

7 From Available Databases, select a cube.

Cubes are listed by catalogue. When you select the cube, the catalogue and cube name are loaded into the text area on the left.

To search for an InfoProvider:

- a. Under **Enter search criteria**, enter the criteria by which to search.
- b. Under **Search by label**, select whether to search for the InfoProvider based on the technical name, the description, or both.
- c. Click **Search**.
- d. Based on the search criteria entered, Web Analysis displays the technical name of the InfoProvider, the description of the InfoProvider, or both under **Available Databases**.

8 Select Finish.

SQL Server Analysis Services

SSAS Prerequisites

To access SSAS, you must first install the SSAS client. For example, 2000 (version 8) from Pivot Table Services install or 2005 (version 5) from OLE DB 9 installer. The other pre-requisites are:

- Install and configure Oracle's Hyperion Reporting and Analysis
- User authorization for Web Analysis
- Access to Microsoft SQL Server Analytic Services as a data source
- Access to the SSAS database and/or your own database

SSAS Advanced Member Selections

| Option | Selects |
|----------------------|---|
| Also select Children | The currently selected member and its children (one level below). |
| Also select Level | The currently selected dimension member and all dimension members on one level. |
| Also select Previous | A variable number of previous members from the right-clicked member's level. Uses the MDX LAG command to indicate the number of previous members to return. |

| Option | Selects |
|-------------------|---|
| Select Dim Bottom | All lowest level descendants. |
| Date Time Series | Time dimension members based on time definition criteria. SSAS does not return aggregated values for DTS selections, and returns only the members that satisfy the criteria. |
| Select Top/Bottom | A variable number of dimension members based on their rank by another specified dimension member. You can select the top values or the bottom values. Rank can be calculated by percentage, sum, or count. Sum uses a threshold value to select dimension members up to and including the value that exceeds the threshold. Results may differ from dimension browser preview, due to the influence of custom filter selections on the query. |

SSAS Features Available in Web Analysis Studio

The SSAS features available in Web Analysis Studio are:

- Suppress Missing data or zero
- Select ID/member vs Description/Alias per dimension
- Multiple Hierarchies
- Ragged Hierarchies
- Linked Cubes
- Large Dimensions (1-Million+ Members — that is, more than 1 million members)
- Cell-Level & Dimension-Level Security
- Data Mining & Mining Dimensions
- Connection Pooling
- MSAS 2005 Aggregates
- Local Cube support
- Server-side Top/Bottom and Hierarchical Sort

SQL Server Analysis Services Connectivity

To connect to Microsoft SQL Server Analysis Services, a database connection is needed. If a database connection exist, proceed to Step 2.

1. If no database connection exist:
 - In Web Analysis Studio, select **File**, then **New**, then **Database Connection**, then **SSAS**.
 - For SSAS Server, User ID, and Password enter the required information and click **Next**
 - Select a cube and click **Finish**.
 - Enter a database connection name in the **Save** dialog box.
2. To create a document, select **File**, then **New**, then **Document Wizard**.
3. Click **Browse** and select an SSAS database connection.
4. Select **Auto Populate Dimensions** and click **Next**

5. From **Filters** add one or more dimensions to **Rows**.
6. Double-click a dimension in Rows and select members.

Note: You can right click a member to use dynamic member selections.

7. From **Filters** add one or more dimensions to **Columns**
8. Double-click a dimension in columns and select members
9. Click **Next** to select Page members or click **Finish** to complete.

Relational Access

There are five methods for accessing relational data from the Web Analysis Studio client:

SQL Spreadsheet

SQL Spreadsheets represent relational data sources as spreadsheet, using standard SQL syntax queries. See [Chapter 14, “Creating SQL Spreadsheets.”](#)

Freeform Grid

Freeform grids enable you to combine data values from multiple data sources in one data object. See [Chapter 15, “Creating Freeform Grids.”](#)

Relational Drill-through

Web Analysis Studio users can construct liaisons between OLAP data and relational data sources. This navigation from OLAP to relational data is called "relational drill-through." After configuration, you can drill from the bottom of OLAP dimensions (level 0) to relational data.

Web Analysis Studio stores relational drill-through definitions as database connection properties of an Essbase database connections. The query result set is presented in the format of the SQL Spreadsheet described above. See [“Integrating OLAP and Relational Data” on page 162.](#)

Relational Database Connection

Relational database connections specify a relational database type and login credentials and relational tables, and define the properties of the database connection and cube. Web Analysis Studio clients query the specified relational data source, aggregate the result set, and express data in the format of an OLAP cube.

Integration Services Drill-through

Integration Services Drill-through is a server-based form of relational drill-through. Like conventional relational drill-through, you can construct liaisons between OLAP and relational data sources. Unlike conventional relational drill-through, you can drill to the relational document from intersection in the Web Analysis document.

Your Essbase Administrator must establish Integration Services drill-through documents. The relational query is stored as Intersection metadata, and flagged with an LRO indicator. When you double-click flagged cells, the OLAP document navigates to the specified relational document.

See [“Integration Services Drill-Through” on page 244](#).

Controlling Query Result Set Size

Query governors vary for relational access methods.

SQL spreadsheets and relational drill-through methods enable you to declare query governors while creating SQL queries or relational drill-through definitions.

When you drill from OLAP to relational data, passing only the drilled OLAP dimension member to the relational data source may result in a large query result set. To focus and diminish the query result set, you can pass OLAP page and filter dimensions.

Other relational access methods rely on the `WebAnalysis.properties` file to limit the query result set.

Relational Database Connections

Before beginning, you must know the kind of supported JDBC RDBMS to which you are connecting, the name of your server and database, and have log on credentials. You also must know the organization and content of relational tables, to select and map column and table selections to a fact table.

Connection Page

The first relational database connection wizard panel, Connection, requires you to configure a JDBC driver by specifying a supported relational database, editing the database connection string, and providing database login credentials.

| Text box or Control | Description |
|----------------------------|--|
| Driver Type | Selects one of the supported relational databases: <ul style="list-style-type: none"> ● IBM DB2 7.2 Personal Edition ● IBM DB2 7.2 fp7 and 8.1 fp2 Workgroup and Enterprise Edition ● Microsoft SQL Server 2000 sp3 ● Oracle 8.1.7 and 9.2.1 ● Teradata 4.1 |
| JDBC Driver | Displays the Java Database Connectivity Driver. |
| Database Connection String | Provides a sample database connection string syntax. Edit the string until it specifies the RDBMS computer name and database name. |
| Username | Indicate a user name for the relational database. Important! You cannot create relational database connections without a user name and password. |
| Password | Indicate a password for the user name. Important! You cannot create relational database connections without a user name and password. |
| Test Connection | Click to test the relational connection before proceeding. |

Important notes on JDBC drivers:

The JDBC driver connects the application server hosting Web Analysis Studio and the relational database, not the client computer. You must ensure that the application server is able to connect.

Web Analysis Studio currently supplies all drivers that Oracle | Hyperion supports.

IBM DB2 is release specific. Oracle | Hyperion provides the JDBC driver for IBM DB2 7. The `DB2java.zip` client drivers must match the `DB2java.zip` archive on the IBM DB2 database server. **Caution:** Be extremely careful when copying files from the RDBMS server to the Web Analysis Studio installation directory! There are extreme consequences if you overwrite the application server local DB2 files used to access configuration information.

The Teradata 4.1 Connection string features four bracketed JDBC connection string parameters. Brackets and parameter names must be replaced with values.

| Parameters | Description |
|-----------------|--------------------|
| {host-name} | Server domain name |
| {port} | TCP/IP port number |
| {DSN} | Data source name |
| {database name} | A database name |

Note: JDBC driver archives must be explicitly referenced by file name within the classpath of the Webapp application server.

Select Fact Table Page

The second relational database connection wizard panel, Select Fact Table, provides filters for locating a fact table by schema and finally table name.

| Text box or Control | Select |
|----------------------------|---|
| Schema Filter | A schema type from the corresponding drop-down list. |
| Table Type Filter | A table filter from the corresponding drop-down list. |
| Retrieve Table List | This button retrieves the list of relational tables. |

Relational Cube Editor

The third relational database connection wizard panel, Relational Cube Editor, diagrams the relational cube as a node tree.

| Default Node | Shortcut Menu | Right-click node and select menu command to: |
|---------------------|----------------------|---|
| Relational Cube | | |
| | Rename Cube | Specifies the relational database connection name. |
| Dimensions | | |
| | Add Dimension | Creates a dimension. |
| Defined Dimension | | |
| | Add Generation | Specifies a relational column as a dimension generation. |
| | Rename Dimension | Specifies a name for the dimension. |
| | Delete Dimension | Removes the dimension from the node hierarchy. |
| | Preview | Displays a node tree of the selected dimension hierarchy. |
| Defined Generation | | |
| | Edit Generation | Changes properties for that generation. |
| | Rename Generation | Specifies a name for that generation. |
| | Delete Generation | Removes that generation from the node hierarchy. |
| | Move Up | Moves that generation up in the node hierarchy. |
| | Move Down | Moves that generation down in the node hierarchy. |
| | Preview | Displays a node tree of the selected dimension hierarchy. |
| Measures | | |

| Default Node | Shortcut Menu | Right-click node and select menu command to: |
|-----------------|-----------------------|---|
| | Edit Measures | Specifies columns as measures. |
| | Rename | Specifies another name for the measures dimension. |
| | Preview | Displays a node tree of the selected dimension hierarchy. |
| Defined Measure | | |
| | Rename Member | Specifies a name for the measure. |
| | Delete Measure | Removes the measure from the node hierarchy. |
| | Preview | Displays a node tree of the selected dimension hierarchy. |
| | Order By Mode | Indicates the label used to determine Dimension Header Sorting. Options include ID and Alias. |
| | Dimension Header Sort | Indicates the order that relational members are displayed by the Dimension Browser dialog box. Subsequent users must use this dialog box to select members from the relational data source. Options include: <ul style="list-style-type: none"> ● Default (Natural ordering based on outline) ● Ascending ● Descending |
| Properties | | Displays the properties of the currently selected node. |


Important notes on relational table properties:

To protect open documents and to expedite network traffic, there is only one cached JDBC connection per user per relational database connection. Therefore, relational database connection edits are not implemented until you log off Web Analysis Studio and log back on.

Creating Relational Database Connections

► To create a relational database connection:

1 Perform one:

- Select **File**, then **New**, then **Database Connection**, then **Relational**.
- Click , and select **Database Connection**, then **Relational**.

The Process bar displays the steps for creating relational database connections: **Connection**, **Select Fact Table**, and **Define Cube**. To successfully create a JDBC RDBMS connection, you must know the kind of relational data source you are accessing, the parameters needed to connect to it, and have a user name and password that supports connectivity.

2 Select one from **Driver Type**:

- **IBM DB2**

- Microsoft SQL Server
- Oracle
- Teradata
- Other

Your JDBC driver selection populates the **Database Connection String** text area with a relational database connection string. If you selected Other, you must define your own JDBC connection string.

3 Replace Database Connection String variables with values.

Depending on the driver type, there are variables for host name, database name, port, and DSN. You must replace the brackets and the variable.

4 Enter a JDBC user name in Username.

5 Enter a password in Password.

6 Click Test Connection.

If the connection fails, repeat steps 6 through 10 until you can establish successful relational database connectivity. Make sure you remove brackets from string variables.

7 After connecting, close the Test Connection message and click Next.

Step 2: **Select Fact Table** you must select a relational fact table from a list. Schema filters and table type filters are available to narrow long lists of tables.

Note: Before you can use a schema filter, it must be mapped to the RDBMS database user name used to log on to the database. This user name is specified on the previous wizard page, **Configure JDBC Drivers**.

8 Select a schema from Schema Filter.

9 Select a table type from Table Type Filter.

10 Click Retrieve Table List to query the relational database for tables meeting filter requirements, and display the result set.

To select the fact table, you must understand the relational database. If necessary, ask the relational database administrator to identify the fact table. The fact table must contain at least one column of numeric data that can be used as a measures dimension.

11 Select a table to be used as the fact table from the table result set, and click Next.

Step 3 **Relational Cube Editor** diagrams the relational cube as a node tree in the same manner that the Dimension Browser presents OLAP cubes. Click to select a node. Double-click to expand and collapse nodes. Right-click to edit dimensions and measures.

12 Right-click Measures and select Edit Measures.

The **Measure Editor** dialog box enables you to define relational columns as measures by moving them from the **Available Columns** list to the **Measures Members** list. You can also rename the measures dimension, specify the default dimension, add measures to the cube, and specify aggregation methods for measures dimensions.

- 13 Select a column with a numeric data type from **Available Columns**, and click the **right arrow (>)** to move the column to **Measure Members**.

Note that the selected measure is designated as the default measure dimensions.

- 14 **Optional:** When **Measure Members** contains multiple measures, you can specify the measure used as the default measure by clicking an option in **Default**.
- 15 **Optional:** To change the measure name, double-click **Member Name**, and type a name. Member names must be unique to each other and the name of the measures dimension for SQL parsing to be successful.
- 16 **Optional:** To indicate another member aggregation method, click **Aggregation Type** and select from these aggregation methods. When no aggregation type is specified Sum is used by default:

- Sum
- Count
- Min
- Max
- Avg

- 17 When all fact table columns used as measures are specified, click **OK**.

The **Relational Cube Editor** is displayed. Note that the Measures node can be expanded to display the measures dimension.

- 18 Right-click **Dimensions** and select **Add Dimension**.

The **New Dimension Name** dialog box is displayed.

- 19 Enter a dimension name to define, and click **OK**.

The **Generation Editor** dialog box is displayed. It enables you to create a generation for the dimension, to name the generation, to indicate the ID and alias tables used for return values, and to relate the dimension back to the fact table.

- 20 Enter a dimension generation name in **Generation Name**.

Note that **Select Member ID and Description Columns** displays the fact table by default.

- 21 To narrow the list of tables, select a filter from **Table Type**.

- 22 Select a table from **Table**.

- 23 Indicate the ID aliases column in the top **Column** list.

- 24 Indicate the Descriptions aliases column in the bottom **Column** list.

By identifying common table columns, you relate the defined dimension generation to the fact table. Typically, several sets of common columns are used to identify a circuit to the fact table.

Ask the relational database administrator for a description of relational tables and their columns to discern common table columns.

Start by identifying tables sharing columns with the dimension generation table. Find tables sharing columns with the fact table. Determine if tables that share columns with the dimension generation also share columns with the fact table. If they do, your relationship

is mapped. If not, you must continue comparing columns until you can map a bridge between the dimension generation and the fact table.

Note that **Define Fact Table Mappings** displays the dimension and the fact table by default. Unless they share a common column, you must select a **Table Type** filter, a table, and a column that matches the dimension generation. If they do share a common column, you need only indicate that column in the **Column** drop-down list.

When a table and column are selected, a line is added to **Define Fact Table Mappings** below until the dimension generation and fact table relationship is mapped.

Keep these considerations in mind as you make your selections.

- Question marks (?) indicate unspecified columns.
- Left and right **Column** lists must display common columns.
- Each **Define Fact Table Mappings** line should display column sets that differ from the line above.
- To improve performance, specify as few column sets as is possible.

25 In **Define Fact Table Mappings, select a table from **Table** that has a column that matches **Column**.**

The specified table and column display on a line below.

26 Select a **Column at right that matches the **Column** at left.**

27 Repeat steps 25 and 26 until a relationship between the dimension generation and the fact table is mapped, and click **OK.**

The **Relational Cube Editor** is the current dialog box again. Note that the **Dimension**, **generation** and **Measures** nodes can be expanded, by clicking the plus sign (+), to display the relational cube structure.

28 Optional: To add generations to one dimension, right-click the dimension name and select **Add Generation. The **Generation Editor** is displayed again. Repeat steps 20-27.**

29 Optional: To reorder the generations in the dimension hierarchy, right-click a generation name and select **Move Up or **Move Down**.**

The generation node moves in the specified direction in the dimension hierarchy.

30 Optional: To add dimensions to one relational cube, right-click **Dimensions and select **Add Dimension**. Repeat steps 18-29.**

31 When all measures, dimensions, and generations are defined and ordered, click **Finish.**

The **Save As** dialog box is displayed. It prompts you to navigate to the repository location where the database connection is saved.

32 Navigate to the folder into which you want to save your database connection file:

- Click **Up** to display the contents of the parent folder in the selection frame.
- Click **Home** to jump to and display the contents of the current Home folder (set in preferences) in the selection frame.
- In **Location**, type the path to the repository folder whose contents you want displayed, and press **Enter**.

- In **Location**, click the drop-down arrow and select another location from the repository.
- When you navigate to another folder, you can click **Previous** to return to the last folder.
- Similarly, you can click **Next** to display the next folder in the location series.

As you navigate, the selection frame lists the files and folders indicated by **Files of Type**.

- 33** When you reach the location where you want to save the file, enter a name for the database connection in **Filename**, and click **OK**.

Your relational database connection file is saved to the specified repository location. You can use it to create documents, just as you would OLAP database connection.

Editing Database Connections

You edit database connections to select other data sources or change formatting preferences.

► To edit database connections:



- 1 In **Web Analysis Studio**, navigate the repository to locate the database connection file.
- 2 Select the database connection file, then right click and select **Edit** to display the Database Connection wizard.
- 3 Change items as desired.

You can select different servers and databases.

- 4 Click **Finish** to save the changes and close the Database Connection wizard.

Changing Database Connections for Report Objects

► To change the database connection that a report object (that is, spreadsheet, chart, or pinboard) uses:

- 1 Open a **Web Analysis** document; if it contains multiple report objects, select a report object to edit by clicking on it.
- 2 Click  to display the **View Pane**.
- 3 Right click  **Database** (database node) in the View Pane and select **Change Database**.

The Open dialog box is displayed.

- 4 Select a database connection and click **OK** to change the database connection for the report object.

13

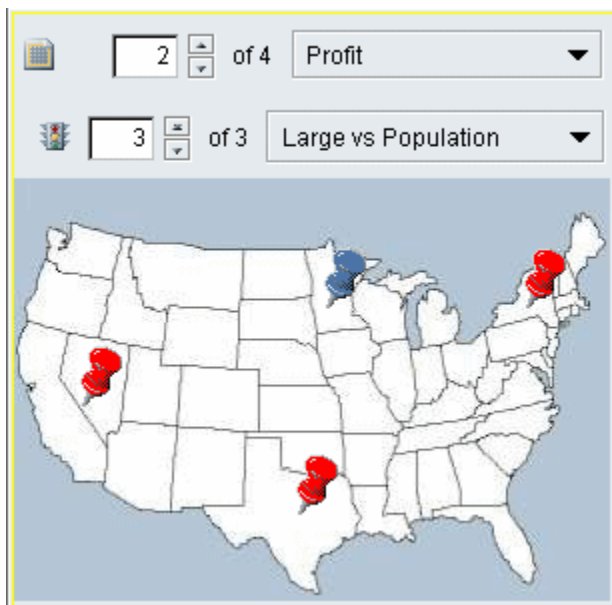
Creating Pinboards

In This Chapter

| | |
|----------------------------------|-----|
| Pinboards | 185 |
| Pinboard Designer | 186 |
| Creating a Pinboard | 187 |
| Modifying Pinboards | 188 |
| Creating a Pinboard Series | 188 |
| Creating Pins | 188 |
| Creating Image Pins | 190 |
| Creating Color Pins | 191 |

Pinboards

Pinboards are custom graphic representations of multiple dimensions. Pinboard dimensions are represented by a graphic, pin icons on the graphic, and the color (or state) of the pins.



Pinboards Prerequisites

Because pins dynamically change image or color based on traffic lighting cues, you must establish traffic light definitions for the corresponding spreadsheet before designing the pinboard.

Creating a Pinboard Series

A pinboard series enables drilling from one pinboard to another. You create the first pinboard in the series and use the Pinboard Designer shortcut menu to designate subsequent pinboards. The subsequent pinboards are generated using the children of the previous pinboard's pins. If the current pinboard represents the dimension bottom, no subsequent pinboard can be created in this series. See [“Creating a Pinboard Series” on page 188](#).

Creating Pins

You can use the default pins provided with Web Analysis Studio or create your own pins using the Pin Designer. Pins can change an image or color based on traffic lighting. See [“Creating Pins” on page 188](#).

Traffic Lighting Control Panel

Only the pinboard display type displays a traffic lighting control panel when multiple traffic lighting definitions exist in the document. The traffic lighting control panel enables you to scroll through the series of traffic lighting definitions.

Note: If a traffic lighting definition exists on the opposite axis (row versus column, or column versus row), it will be listed in the traffic lighting control panel, however it cannot be used to define a pinboard on the selected axis. Only traffic lighting definitions that exist on the same axis as the selected axis can be used to define a pinboard.

Select Traffic Lighting Dimension Dialog Box

The Select Traffic Lighting Dimension dialog box prompts you to create a pinboard from another display type without traffic lighting. After selecting the dimension to which a traffic lighting definition is applied, the Traffic Lighting dialog box is displayed to finish the definition.

Pinboard Designer

The Pinboard Designer interface includes:

- Pinboard panel— positions pin graphics relative to the background.
- Image Source group—Specifies the background.
- Member Selections group—Specifies dimension members used as pins.

- Null Pins group—Indicates how to display members with null values.
- Select Pin Images group—Specifies the kind of pin to display for each traffic lighting color.

Creating a Pinboard

► To create a pinboard:

- 1 **Open spreadsheet with a traffic lighting definition.**
- 2 **Select **Display**, then **Pinboard**.**

Note: If a pinboard is defined for the document, it is displayed as a result of your selection. When no pinboard is defined, the Pinboard Designer is displayed. To edit a Pinboard, right-click the data object and select Edit Pinboard.

Pinboard Designer is displayed, automatically displaying column dimension members as pins and traffic lighting ranges as pin colors in the Select Pin Images group.

- 3 **In the **Image Source** group, click **Set Background**.**

The Open dialog is displayed.

- 4 **Navigate to a GIF or JPEG file to use as the background. Select the file name, and click **OK**.**

The selected image is displayed in the Pinboard Designer panel.

- 5 **Optional: To set the image to fill the Pinboard panel, select **Stretch to Fit**.**

- 6 **Optional: To change the dimension member selections, perform one:**

- Click the Member Selections list to select other traffic lighted column dimension members.
- Click **Add Members** to display the Dimension Browser, and change dimension member selections.
- Click **Add Calculations** to create pins from calculated members.
- Right-click a pin and select **Delete Pin**, to remove pins without redefining the member selection statement.

- 7 **Optional: To specify to hide pins with null values, select **Hide Null Pin**.**

- 8 **Optional: You can also select a special color for pins with null values, by clicking **Select Null Pin Color**.**

The Select Null Pin Color dialog box is displayed, enabling you to select a color, and click OK. See [“Selecting Color” on page 110](#). The selected color is displayed in the box beside the button, after selection.

The specified dimension members are rendered with default pins on the Pinboard panel. The Select Pin Images group reflects the traffic lighting range colors. You can also specify pin images that differ for each traffic lighting range, or a different part of the current pin image to reflect the traffic lighting range color.

See “Creating Image Pins” on page 190, or “Creating Color Pins” on page 191.

- 9 Drag pin images on the Pinboard background to position them.
- 10 Click Pinboard Designer **OK** to display the finished pinboard.

Modifying Pinboards

You must have the correct permissions to change pinboards.

- To edit a pinboard, select **Edit Pinboard** from the data object shortcut menu and modify options.

Creating a Pinboard Series

- To create a pinboard series:
 - 1 **Create the starting pinboard and its pins.**

The starting pinboard must feature pins with descendants.
 - 2 **Right-click a pin on the Pinboard Designer and select the **Next Pinboard** menu command.**




Pinboard Designer displays a subsequent pinboard using the children of the previous pinboard pins.
 - 3 **Set the background image, and pin images. Position these pins.**
 - 4 **Repeat until all pinboards in the series are specified.**

This table describes the Pinboard Designer shortcut menu commands that help to define Pinboard series:

| Command | Description |
|-------------------|---|
| Next Pinboard | Go to the next pinboard in the series. If no next pinboard exists, create one using the children of the previous pinboard pins. |
| Previous Pinboard | Go to the previous pinboard in the series. |
| Starting Pinboard | Go to the first pinboard created. |
| Delete Pinboard | Delete the current pinboard. |
| Delete Pin | Delete the current pin. |

Creating Pins

Pin options:

- A default pin, , is provided by Web Analysis Studio.
- An Image Pin, , displays pin images that differ per an associated traffic lighting definition.
- A Color Pin, , changes its active color per the traffic lighting definition.

Selecting Pins

The Select Pin Images dialog box presents pin graphics available for use in the current pinboard. You can add pins, edit pins (using Pin Designer), or delete pins from the list. The default pin cannot be deleted.

- To select a pin for a traffic lighting range:
 - 1 Click a Pin from Pinboard Designer Select Pin Images.**
The Select Pin Images dialog box is displayed.
 - 2 Select a pin from the list and click OK.**
The selected pin is displayed next to the traffic light range it represents.

Creating Pins

- To add a pin image and set it to a traffic lighting range:
 - 1 Click a Pin from Pinboard Designer Select Pin Images.**
The Select Pin Images dialog box is displayed.
 - 2 Click Add.**
The Pin Designer dialog box is displayed.
 - 3 In Pin Image, click Load.**
The Open dialog is displayed.
 - 4 Navigate to a GIF or JPEG file to use as the pin image. Select the file name, and click OK.**
The selected image is displayed in the Pin Designer panel.

Before a pin can be added to the selection list, the "point of the pin" and its active color must be defined. This is accomplished using the Pin Designer shortcut menu:
 - 5 Optional: To set the point of the pin, right-click the pin image where you think the point should be, and select Hotspot.**
The grid to the left demonstrates how the pin is positioned relative to this point.
 - 6 Optional: To set the Active Color, right-click a prominent color in the pin image, and select Active Color.**

The Active Color panel reflects this selection. You should only elect an Active color when you are going to use one pin image for every traffic lighting range. This enables the selected color to adopt the color of the traffic lighting range.

7 Click OK.

The pin is displayed in the Select Pin Images dialog box.

8 Select the pin from the list and click OK.

The pin is displayed next to the traffic light range it represents.

Editing Pins

To redefine pin location point or active color, you can edit pins.

► To edit a pin, access the Select Pin Images dialog box, select the pin and click **Edit**.

See [“Creating Pins” on page 189](#).

Deleting Pins

► To delete a pin, access the Select Pin Images dialog box, select the pin and click **Delete**.

Creating Image Pins

Image pins display pin images that differ per an associated traffic lighting definition. You create Image pins by indicating the pin image to use for corresponding traffic lighting ranges.

Pins on the Pinboard panel may not accurately reflect all pin images and traffic lighting ranges until the Pinboard is finished and displayed as a document.

If you select duplicate images for traffic lighting conditions, you must set the pin Active Color property to differentiate traffic lighting conditions. See [“Creating Color Pins” on page 191](#).

► To create an image pin:

1 Click a Pin from the Pinboard Designer Select Pin Images.

The Select Pin Images dialog box is displayed.

2 Click Add.

3 The Pin Designer dialog box is displayed.

4 In Pin Image, click Load.

The Open dialog is displayed.

5 Navigate to a GIF or JPEG file to use as the pin image. Select the file name, and click OK.

The selected image is displayed in the Pin Designer panel.

Before a pin can be added to the selection list, the "point of the pin" and its active color must be defined. This is accomplished using the Pin Designer shortcut menu:

- 6 Optional:** To set the point of the pin, right-click the pin image where you think the point should be, and select **Hotspot**.

The grid to the left demonstrates how the pin is positioned relative to this point.

- 7 Click OK.**

The pin is displayed in the Select Pin Images dialog box.

- 8 Select the pin from the list, and click OK.**

The pin is displayed next to the traffic light range it represents.

- 9 Repeat steps 1 through 8 for each traffic lighting range.**

The traffic lighting definition displays the corresponding pin for each traffic lighting range, when the Pinboard is in Analyze mode.

Creating Color Pins

Color pins change their active color per the traffic lighting definition. You create Color pins by indicating the pin image to use for corresponding traffic lighting conditions, and indicating the Active Color.

Pins on the Pinboard panel may not accurately reflect all pin images and traffic lighting conditions until the Pinboard is finished and displayed as a document.

Pins on the Pinboard Panel may not accurately reflect all pin images and traffic lighting ranges until the Pinboard is finished and displayed as a document.

► To create a color pin:

- 1 Click a Pin from Pinboard Designer Select Pin Images.**

The Select Pin Images dialog box is displayed.

- 2 Click Add.**

- 3 The Pin Designer dialog box is displayed.**

- 4 In Pin Image, click Load.**

The Open dialog is displayed.

- 5 Navigate to a GIF or JPEG file to use as the pin image. Select the file name, and click OK.**

The selected image is displayed in the Pin Designer panel.

Before a pin can be added to the selection list, the "point of the pin" and its active color must be defined. This is accomplished using the Pin Designer shortcut menu:

- 6 Optional:** To set the point of the pin, right-click the pin image where you think the point should be, and select **Hotspot**.

The grid to the left demonstrates how the pin is positioned relative to this point.

- 7 To set the Active Color, right-click a prominent color in the pin image, and select **Active Color**.

The Active Color panel reflects this selection. By electing an Active color, you indicate that this color is replaced by the traffic lighting range color.

- 8 Click **OK**.

The pin is displayed in the Select Pin Images dialog box.

- 9 Select the pin from the list, and click **OK**.

The pin is displayed next to the traffic light range it represents.

- 10 Click another **Pin** from Pinboard Designer **Select Pin Images**.

The Select Pin Images dialog box is displayed.

- 11 Select a matching pin image, and click **OK**.

The pin is displayed next to another traffic light range. The Active Color of this pin is replaced by the color of the range.

- 12 Repeat steps 10 and 11 for all traffic lighting ranges, and click **OK**.

In This Chapter

| | |
|---|-----|
| SQL Spreadsheets | 193 |
| Creating SQL Spreadsheets | 194 |
| Creating SQL Spreadsheets with SQL Query Builder Wizard | 195 |
| Enter SQL Query Dialog Box | 197 |
| SQL Query Builder Wizard | 198 |
| Creating a SQL Subscription Control | 201 |

SQL Spreadsheets

SQL Spreadsheet data objects enable you to query a relational data source, and display the returned data values on a custom document.

Prerequisites for SQL Spreadsheets:

- SQL Spreadsheets can only be created on a custom document.
- You must understand how to compose a SQL query to create a SQL spreadsheet.
- You must be able to connect to a relational data source using supported JDBC drivers.

To create a SQL Spreadsheet you are required to specify:

- Data source that provides data values
- SQL spreadsheet data object that displays these values
- Query that gets data values from the data source and returns them to the data object.

Note: If you import a Web Analysis document that contains an SQL Spreadsheet (exported and imported via APT file format) from one environment to another, the password in the target environment will not be decrypted properly.. Therefore, you will have to edit SQL query settings to specify a valid password. To change the password for SQL Spreadsheet, right-click on the Spreadsheet and open the Open Query dialog box. Enter the password into the "JDBC password" text field.

The process of creating SQL spreadsheets assumes that you know your JDBC driver, database application, and logon credentials. The process also assumes that you can compose the SQL query for the SQL spreadsheet data object, or be able to use a SQL Query Builder to create a query.

There are four alternatives for accessing relational data in Web Analysis Studio:

- You can create a relational database connection to be used by regular spreadsheets, charts, and pinboards. See [“Creating Relational Database Connections” on page 180](#).
- Free-form grids enable you to combine data values from multiple data sources in one data object. Free-form grids leverage custom document database connections. See [“Creating Freeform Grids” on page 203](#).
- You can create a relational drill-through connection from an OLAP database connection to a relational data source. See [“Creating Relational Drill-Through” on page 163](#).
- You can leverage predefined Integration Services drill-through documents using the Related Content dialog box. See [“Integration Services Drill-Through” on page 244](#).



Note: To troubleshoot SQL queries, copy the SQL statement from the Enter SQL Query dialog box and run it in an RDBMS SQL tool. Compare the result sets.

Creating SQL Spreadsheets

► To create a SQL spreadsheet:

1 Start Web Analysis Studio.

2 Perform one:

- Select **File**, then **New**, then **Document**.
- Click .
- Click , and select **Document**.
- In the View Pane **Browser** tab, right-click a document and select **Edit**.
- Press **Ctrl+N**.

The Document Designer is displayed.

3 Drag the SQL Spreadsheet icon from the component toolbar to a document panel.

The Enter SQL Query dialog box is displayed.

4 Select a supported JDBC driver type from the JDBC Driver drop-down list.

You can select from Microsoft SQL Server, IBM DB2, Oracle, JDBC-ODBC Bridge, and Other.

When the selection is made, a driver name populates the corresponding Driver text box. If Other is selected, you must enter a driver name definition.

When the selection is made, a sample database connection string syntax populates the corresponding JDBC Connection String text box. When Other is selected, you must enter a JDBC database connection string.

5 Edit the sample database connection string syntax so that it specifies your RDBMS computer name and database name.

6 Enter a user name and password for the relational data source in the corresponding text boxes, or select **Username/Password** to enter your current logon credentials.

7 Optional: Define query governor parameters for row limits and fetch size.

The default settings limit the result set to 250 rows, being fetched 100.

8 Define a SQL query, using one of these methods:

- Enter a SQL query, using standard SQL syntax, in the panel at the bottom of the dialog box.
- Click **Query Builder** to display the SQL Query Builder Wizard.
See “[SQL Query Builder Wizard](#)” on page 198.

9 Click **OK**.

The query is sent to the relational data source and a SQL spreadsheet is displayed on the document panel.



Creating SQL Spreadsheets with SQL Query Builder Wizard

The SQL Spreadsheet component offers advanced features for creating dynamic SQL queries and subsequently dynamic relational spreadsheets. You can quickly and conveniently compose SQL queries using the SQL Query Builder Wizard.

► To create a SQL spreadsheet:

1 Start Web Analysis Studio.

2 Perform one:

- Select **File**, then **New**, then **Document**.
- Click .
- Click , and select **Document**.
- In the View Pane **Browser** tab, right-click a document and select **Edit**.
- Press **Ctrl+N**.

The Document Designer is displayed.

3 Drag the SQL Spreadsheet icon from the component toolbar to a document panel.

The Enter SQL Query dialog box is displayed.

4 Select a supported JDBC driver type from the JDBC Driver list.

You can select from Microsoft SQL Server, IBM DB2, Oracle, JDBC-ODBC Bridge, and Other.

When the selection is made, a driver name populates the corresponding Driver text box. If Other is selected, you must enter a driver name definition.

When the selection is made, a sample database connection string syntax populates the corresponding JDBC Connection String text box. When Other is selected, you must enter a JDBC database connection string.

- 5 **Edit the sample database connection string syntax so that it specifies your RDBMS computer name and database name.**
- 6 **Enter a user name and password for the relational data source in the corresponding text boxes, or select **Username/Password** to enter your current logon credentials.**
- 7 **Optional: Define query governor parameters for row limits and fetch size.**

The default settings limit the result set to 250 rows, being fetched 100.

You could define a SQL query by entering standard SQL syntax, in the panel at the bottom of the dialog box, but use the SQL Query Builder as described in these steps.

- 8 **Click **Query Builder** to display the SQL Query Builder Wizard.**

The SQL Query Builder dialog box features tabs corresponding to aspects of your relational data source:

- **Tables**—specifies the relational table(s) to query.
- **Columns**—specifies the columns to be returned by the query.
- **Filters**—narrows the focus of the SQL query by specifying filter criterion for Where clauses.
- **Groups**—organizes relational data on the server before it is returned.
- **Sorting**—orders relational data in ascending or descending order per column.
- **Mappings**—relates relational columns in the SQL query result set to multidimensional dimensions from an OLAP data source.

- 9 **Click **Tables**, and select one or more tables.**

To select a table, click the table name in **Available Tables**, and click one of the arrow buttons. The selection moves to **Selected Tables**. You can also move selected tables up and down in order.

- 10 **Click **Columns**, and select one or more columns.**

To select a column, click the column name in **Available Columns**, and click one of the arrow buttons in the center of the tab. The selection moves to **Selected Columns**.

- 11 **Optional: To change a column name, or apply a function call to the column, click **Add Column Advanced**, the middle button on the Columns tab before moving the column to the Selected Columns frame.**

Add Columns Advanced on the Columns tab displays the Select Column Advanced dialog box, enabling you to apply function calls to a selected column (on the Columns tab) or manually enter a RDBMS supported function call. You can select from these functions: None, Average, Count, Maximum, Minimum, or Sum.

If you would like to change the column name in the SQL spreadsheet display, enter an alternate name in **Displayed As**.

- 12 **Optional: To define Where clauses for the SQL query, click **Filters**.**

The Filters tab enables you to define complex Where clauses by selecting parameters from drop-down lists. Select parameters from four columns: Operator, Column, Comparator, and Value.

To define a Where clause:

- a. Click **Add** to add a row to the Filters frame.
- b. Click the **Column** cell in the row and select a column name from the list.
- c. To filter the selected column, click the **Comparator** cell. You can select from these options:
 - Enter a constant.
 - Right-click and select the value of another column member.
 - Enter a dynamic text label, a variable that is dynamically replaced with a value at runtime. See [“Dynamic Text Labels” on page 200](#).
- d. Click the **Value** cell and select a filter value. This limits the return set to those rows that satisfy filter criteria.

You can compose compound statements by adding additional rows, selecting operands from the **Operator** column and parentheses from the (and) lists.

Note that **Select Distinct** changes the selection statement to a SELECT DISTINCT statement.

13 Optional: To define a dynamic SQL spreadsheet, enter dynamic text labels for values on **Filters**.

You can enter Dynamic Text Labels that reference data, metadata, fixed references and time format syntaxes. See, [“Dynamic Text Labels” on page 200](#).

14 Optional: To define a GROUP BY clause for the SQL query, click **Groups**.

15 Optional: To define a SORT clause for the SQL query, click **Sorting**.

16 Optional: To map columns in your relational data sources to similar OLAP dimensions, click **Mappings**.

You can associate columns in your relational data sources with similar dimensions in an OLAP data source, by mapping columns to OLAP dimensions. These mappings, used when drill linking from an OLAP source to a SQL data object, enable the OLAP query to pass its Where clauses to corresponding relational columns.

17 Click **OK** to query the relational data source and display a SQL spreadsheet.

Enter SQL Query Dialog Box

The Enter SQL Query dialog box enables you to define a relational SQL query that supports the SQL Spreadsheet custom document component. The Enter SQL Query dialog box prompts you to specify a supported JDBC driver, JDBC connection string, log on credentials, and a SQL query. You can compose the SQL query using standard SQL syntax in the panel at the bottom of the dialog box, or you can use a [SQL Query Builder Wizard](#). You can also define row limits and fetch limit parameters for the SQL query.

| Control | Description |
|---------------------------|---|
| JDBC Driver Configuration | <p>Enables you to select a supported JDBC driver from a drop-down list:</p> <ul style="list-style-type: none"> ● IBM DB2 ● Microsoft SQL Server ● Oracle ● Teradata ● JDBC-ODBC Bridge—leverages a Microsoft Windows ODBC driver as a JDBC connection. To use this option, you must manually configure the JDBC Connection String using "JDBC:ODBC:<DSN>" (where <i>DSN</i> is the ODBC connection name). ● Other—Specifies alternative JDBC driver parameters. |
| JDBC Connection String | A sample database connection string syntax is provided in this text box. You must edit the string so that it specifies your RDBMS computer name and database name. In the case of Other, you must enter a database connection string syntax. |
| JDBC Username | Indicate a user name for the relational database. You cannot create a relational database connection without specifying a password. |
| JDBC Password | Indicate a password for the user name. Important! Web Analysis Studio requires this text box to be populated. You cannot create a relational database connection without specifying a user name and password. |
| JDBC Row Limit | Enables you to enter an optional query governor limiting the result set to a number of rows. |
| JDBC Fetch Size | Enables you to enter an optional query governor limiting the number of rows returned at time. In other words, transactions limited to the fetch size are conducted until the overall row limit is reached. |
| SQL Query Panel | Enables you to enter a SQL query manually. |
| Query Builder | Displays the SQL Query Builder Wizard, enabling you to make selections from tabs that are subsequently parsed into a SQL query. |

SQL Query Builder Wizard

The SQL Query Builder wizard specifies the elements used in a SQL syntax query. This is helpful if you are familiar with your relational data source, but do not know SQL syntax.

| SQL Query Builder Tab | Procedure and Controls | Description |
|-----------------------|---|---|
| Tables | | |
| | <p>Select tables in the Available Tables panel and move them to the Selected Tables panel using Add and Remove in the middle.</p> <p>To reorder the table selections, select a table in the Selected Table panel and click the up and down arrow buttons.</p> | Prompts you to select tables from the relational data source, prescribed on the Enter SQL Query dialog box, for use in a SQL query. |
| Columns | | |

| SQL Query Builder Tab | Procedure and Controls | Description |
|-----------------------|--|--|
| | <p>Select columns in the Available Columns panel and move them to the Selected Columns panel using Add and Remove in the middle.</p> <p>To reorder the Column selections, select a column in the Selected Column panel and click the up and down arrow buttons.</p> | Prompts you to select columns from the relational tables for use in a SQL query. |
| | Select Column Advanced | Displays the Select Column Advanced dialog box, enabling you to select a function call, compose an expression, or enter an alternative column label. |
| Filters | | |
| | Click Add to enter a Where clause. Click each column cell and make a selection from the drop-down list. | Prompts you to define filter selections for the Where clause on the SQL query. To focus and diminish the query result set, you can define dimension criteria (filters). |
| | Dynamic Text Labels | You can also employ the powerful dynamic text labels used by the Print function and the Custom Document Label component in your SQL expressions. |
| | Select Distinct | Sets up the query to return only distinct rows; eliminates duplicate rows. |
| Groups | | |
| | <p>Select columns in the Available Group By Columns panel and move them to the Selected Group By Columns panel using Add and Remove in the middle.</p> <p>To reorder the column selections, select a column in the Selected Group By Column panel and click the up and down arrow buttons.</p> | Prompts you to define GROUP BY selections for the SQL query. Groupings sort rows based on column members but do not order the rows. |
| Sorting | | |
| | <p>Select columns in the Available Sort Columns panel and move them to the Selected Sort Columns panel using Add Sort Ascending and Add Sort Descending in the middle.</p> <p>To reorder the Column selections, select a column in the Selected Sort Column panel and click the up and down arrow buttons.</p> | <p>Prompts you to define sorting criteria for the SQL query result set in Ascending or Descending order.</p> <p>Sorting results are influenced by the order of tables, columns, and filters on their corresponding tabs.</p> |
| Mappings | | |
| | Enter the OLAP dimension name to the right of the relational column supporting drill linking. | Prompts you to define (or map) drill links to or from relational columns to OLAP dimensions in other documents. |

Select Column Advanced Dialog Box

The Select Column Advanced dialog box specifies a function call, composes an expression, or enters an alternative column label in a SQL Spreadsheet query. You can access the Select Column Advanced dialog box only from the Columns tab of the [SQL Query Builder Wizard](#).

| Control | Description |
|--------------|---|
| Function | Enables you to enter a function call related to the column selected on the Column tab of the SQL Query Builder wizard. <ul style="list-style-type: none">● None● Average● Count● Maximum● Minimum● Sum |
| Expression | Enables you to manually enter a RDBMS supported function call for the column selected on the Column tab of the SQL Query Builder wizard. |
| Displayed As | Enters an alternative column label in the SQL Spreadsheet query for the column selected on the Column tab of the SQL Query Builder wizard. |

Dynamic Text Labels

Dynamic text labels are variables that are dynamically replaced with values at runtime. Dynamic text labels display the latest information without being manually updated

You can use Dynamic Text Labels in these ways:

- To create dynamically updated labels on custom documents, add dynamic text labels to custom document label objects using the shortcut menu. See [“Creating Dynamic Text Labels” on page 231](#).
- To create dynamically updated headers and footers for your JPG output, PDF output and hardcopy printing, use dynamic text labels in the Print dialog box Headers/Footers tab. See [“Print Dialog Header/Footer Tab” on page 150](#).
- To create dynamic SQL statements, include dynamic text labels in your SQL filter clauses as values.

| Dynamic Text Tag | Default Tag | Description |
|------------------|--------------|--|
| Cell Reference | <<cell 0,0>> | Inserts a cell reference string in the label object. |
| Filter | <<filter 0>> | Inserts the filter member name in the label object. |

After dynamic text labels are entered, you can edit the tag to display additional information.

Dynamic Text Labels for SQL Spreadsheets

Dynamic Text Labels are used primarily in custom report label objects and in the Headers/ Footers tab.

Two dynamic text labels are supported with SQL Spreadsheets: *filter* and *Cell* of the print dialog box. Because SQL spreadsheet objects cannot be selected on Web Analysis documents as on standard OLAP spreadsheets, charts, and pinboard, filter and cell functions must use fixed references to their data source. For example, the filter function must contain `ReportSQLDataSrc`, which is selected when a SQL subscription control is defined:

```
<<filter ReportSQLDataSrc1, 0>
```

A reference without a data-source specification (for example, `<<filter 0>>`) does not function with SQL spreadsheets.

Cell Functions

Cell functions insert cell reference strings in label objects. The fixed reference format for the function is:

```
<<cell SQLDataSourceName1, row, column>>
```

Where

row is the numerical row reference on the spreadsheet and *column* is the numerical column reference on the spreadsheet

Filter Functions

Filter functions insert filter member names in label objects. The fixed reference format for the function is:

```
<<filter SQLDataSourceName1,n>>
```

Where

n is the filter number in the order that is displayed in the SQL WHERE clause:

```
SELECT MONTH, PRODUCT, CITY, SALES, COGS FROM DETAILS WHERE PRODUCT =  
'100-10' AND MONTH = 'Aug'
```

```
<<filter ReportSQLDataSrc1, 0>> returns 100-10
```

```
<<filter ReportSQLDataSrc1, 1>> returns Aug
```

Creating a SQL Subscription Control

➤ To create a SQL subscription control for a SQL Spreadsheet:

- 1 Start Web Analysis Studio.

You must open a document containing a SQL Spreadsheet or create a SQL spreadsheet after entering Document Designer.

- 2 **Select File , then New, then Document.**

The Document Designer is displayed.

- 3 **Drag the SQL Subscription Object icon from the component toolbar to a document panel.**

- 4 **Select the SQL spreadsheet data source for the subscription object.**

The Select Column dialog box is displayed, prompting the user to select a column from the relational data source. The members of this column populate the drop-down list of the control.

Select the asterisk character (*) to return all column members.

- 5 **Select the relational data source column, and click OK.**

The SQL Subscription Control is displayed on the document panel. The control functionality takes effect when you return to Analyze mode.

In This Chapter

| | |
|--|-----|
| Freeform Grids..... | 203 |
| Creating Freeform Grids | 204 |
| Formatting Freeform Grids | 206 |
| Creating Formulas for Freeform Grids | 207 |
| Controlling Freeform Grid Content with Data Objects..... | 209 |

Freeform Grids

Freeform grids present OLAP, relational, and manually entered data on one data object, and enable you to leverage these data sources in integrated dynamic calculations.

Freeform grids are comprised of only rows and columns. There is no visual representation of page dimensions participating in cell intersections. You can still use OLAP database connections with dimension members assigned to the Page axis, but you cannot navigate through these page dimensions unless you create additional subscription controls. In short, only the first page of a multidimensional cube is displayed.

Freeform Grid prerequisites:

- Freeform Grids can only be created on a custom document.
- You must understand how to compose a SQL query to access relational data sources.
- You must be able to connect to a relational data source using supported JDBC drivers.

There are four alternatives for accessing relational data in Web Analysis Studio:

- You can create a relational database connection to be used by regular spreadsheets, charts, and pinboards. See [“Creating Relational Database Connections”](#) on page 180.
- SQL Spreadsheet data objects enable you to query a relational data source, and display the returned data values on a custom document. See [“Creating SQL Spreadsheets”](#) on page 194.
- You can create a relational drill-through connection from an OLAP database connection to a relational data source. See [“Creating Relational Drill-Through”](#) on page 163.
- You can leverage predefined Integration Services drill-through connections using the Related Content dialog box. See [“Integration Services Drill-Through”](#) on page 244.

To create freeform grids you are required to specify:

- The data sources providing data values
- The Freeform Grid data object that displays these values
- The queries retrieving data values.



The process of creating freeform grids assumes that you know your data sources and logon credentials. Freeform grid querying methods are not unique; you can use the database connections established for other data objects.

Creating Freeform Grids

► To create a freeform grid:

1 **Start Web Analysis Studio.**

2 **Perform one:**

- Select **File**, then **New**, then **Document**.
- Click .
- Click , and select **Document**.
- In the View Pane **Browser** tab, right-click a document and select **Edit**.
- Press **Ctrl+N**.

The Document Designer is displayed.

3 **Drag the Freeform Grid icon from the component toolbar to a document panel.**

An empty freeform grid and the Set Grid Size dialog box are displayed. Note that the grid can consist of only row and column axes.

4 **Enter the number of rows in Number of Rows.**

5 **Enter the number of columns in Number of Columns.**

6 **Click OK.**

The grid is reset to the indicated number of rows and columns.

7 **Optional:** To move the freeform grid object, click and drag the component with the Move cursor to another location on the document panel.

The conventional cursor is transformed into the Move cursor when it is floated over a selected component. Be careful not to drag over a blue selection handle, as this resizes the component instead of moving it.

8 **Optional:** To resize the freeform grid object, click and drag the blue selection handles on the sides and corners of the selected grid component.

9 **Optional:** To anchor the freeform grid object to document panel borders, right-click the component and select **Anchor**, and an anchor option: **Top, Bottom, Left, Right, Slack, None**.

The Anchor property orients selected components to an edge of the panel containing them. Using Slack, you can realign objects to occupy empty space. It is best to design documents in terms of container panels and orient components relative to these panels. Components that are placed with an absolute alignment in the context of the main document panel, maintain their position even as other components fluctuate. This may cause the overlapping and shifting of components.

10 When the custom document is laid out correctly, click **Analyze.**

The remaining customization is done in the Analyze interface.

Data sources are anchored at cells in a freeform grid. This is done by selecting a cell and composing a query.

11 To specify an OLAP or Oracle | Hyperion data source, perform these tasks:

- a. Right-click a cell and select **Add Data Source**.

The Select Data Source dialog box is displayed.

- b. You can select a database connection, or select **<Add Data Source>** to define a database connection, and click **OK**.

- i. If you selected **<Add Data Source>**, the Open dialog box is displayed. Select a database connection, and click **OK**. The Data Layout dialog box is displayed, so that you can create a query for the selected cell. Assign dimensions to axes, make members selections, and click **OK**.

Note that you cannot page dimension member selections assigned to the Pages axis, unless you create a subscription control using a matching data source and page dimensions.

- ii. If you selected a database connection, the cell is populated based on the selected database connection.

12 To specify a relational data source:

- a. Right-click a cell and select **Add SQL Query**.

The Enter SQL Query dialog box is displayed.

- b. Enter the JDBC connection information, log on credentials, query governor parameters and SQL statement, and click **OK**. See [“Creating SQL Spreadsheets” on page 194](#).

The query is submitted to the corresponding data source, and the result set origin is displayed at the origin of the selection set.

13 To manually enter data values in the freeform grid, click a cell and enter text.



See [“Formatting Freeform Grids” on page 206](#) and [“Creating Formulas for Freeform Grids” on page 207](#).

Formatting Freeform Grids

You cannot format freeform grids. They inherit formatting definitions from the database connections that they use. You can, however, show and hide numerous aspects of the freeform grid data object:

- To show or hide a freeform grid component, right-click the freeform grid and select one:
 - **Show/Hide Formula Bar.**
 - Show/Hide Headers
 - Show/Hide Horizontal Gridlines
 - Show/Hide Vertical Gridlines
- To insert a row or column in a freeform grid, right-click the freeform grid and select **Insert Row** or **Insert Column**.
- To remove a row in a freeform grid, right-click the freeform grid and select **Remove Row** or **Remove Column**.
- To resize row height or column width:
 - 1 In **Analyze mode**, float the cursor between two header cells until the cursor changes to the **Resize cursor**.
 - 2 **Drag column borders left or right, and drag row borders up and down.**
 - 3 **When the column or row is sized correctly, release your mouse.**
- To hide a column or a row, size the header down to 0 pixels.

Note: Conversely, if you encounter missing columns or rows, you should assume that the header is sized down to 0 pixels to hide the content of that column or row.

- To insert multiple rows and columns in a freeform grid:
 - 1 Click  to return to **Document Designer**.
 - 2 **Right-click the grid and select Properties.**
The Set Grid Size dialog box is displayed.
 - 3 **Enter a number of rows and columns, and click OK.**
The grid is reset to the indicated number of rows and columns.
 - 4 Click  to return to **Analyze mode**.

Creating Formulas for Freeform Grids

Freeform grids leverage diverse data sources in integrated dynamic calculations. Cell references use syntax that matches those supported by Microsoft Excel, where the column letter and the row number indicate the cell address.

Example: =SUM(B8:C8) adds the data values from the cell on the eighth row of the B column to the eighth row of the C column.

Note: Formula cell addresses are absolute. They do not dynamically change themselves to accommodate the displacement caused by adding or removing rows or columns. As a result, you should not compose freeform grid formulas until you are finished with all other grid formatting.

You can enter these functions in cells or the Formula bar.

- OPERATOR_ADD=+
- OPERATOR_SUBTRACT=-
- OPERATOR_DIVIDE=/- OPERATOR_MULTIPLY=*- OPERATOR_POWER=^- OPERATOR_EQUAL==- OPERATOR_DIFFERENT=<>- OPERATOR_GREATER_OR_EQUAL=>=- OPERATOR_LESS_OR_EQUAL=<=- OPERATOR_GREATER=>- OPERATOR_LESS=<- CONDITION_IF=IF- CONDITION_THEN=THEN- CONDITION_ELSE=ELSE- FUNCTION_LN=LN- FUNCTION_LOG=LOG10- FUNCTION_EXP=EXP- FUNCTION_SQRT=ROOT- FUNCTION_COS=COS- FUNCTION_SIN=SIN- FUNCTION_TAN=TAN- FUNCTION_ACOS=ACOS- FUNCTION_ASIN=ASIN

- FUNCTION_ATAN=ATAN
- FUNCTION_COSH=COSH
- FUNCTION_SINH=SINH
- FUNCTION_TANH=TANH
- FUNCTION_INTEGER=INT
- FUNCTION_ABS=ABS
- FUNCTION_NOT=NOT
- JEKS_FUNCTION_SUM=SUM
- JEKS_FUNCTION_RAND=RAND
- JEKS_FUNCTION_MODULO=MOD
- JEKS_FUNCTION_FACT=FACT
- JEKS_FUNCTION_IF=IF
- JEKS_FUNCTION_AND=AND
- JEKS_FUNCTION_OR=OR
- JEKS_FUNCTION_TRUE=TRUE
- JEKS_FUNCTION_FALSE=FALSE
- JEKS_FUNCTION_DATE=DATE
- JEKS_FUNCTION_DATEVALUE=DATEVALUE
- JEKS_FUNCTION_NOW=NOW
- JEKS_FUNCTION_TIME=TIME
- JEKS_FUNCTION_TIMEVALUE=TIMEVALUE
- JEKS_FUNCTION_YEAR=YEAR
- JEKS_FUNCTION_MONTH=MONTH
- JEKS_FUNCTION_DAY=DAY
- JEKS_FUNCTION_WEEKDAY=WEEKDAY
- JEKS_FUNCTION_HOUR=HOUR
- JEKS_FUNCTION_MINUTE=MINUTE
- JEKS_FUNCTION_SECOND=SECOND
- JEKS_FUNCTION_CHAR=CHAR
- JEKS_FUNCTION_FIND= FIND
- JEKS_FUNCTION_CODE=CODE

These conditional operators are also supported:

- IF
- THEN

- ELSE

Controlling Freeform Grid Content with Data Objects

Due to the variety of data sources available, freeform grids do not offer the navigation methods and Analysis Tools available to other data objects. Instead of navigating directly on the freeform grid, you may use another data object that shares the data source to control grid content.

Because the freeform grid shows only the first Page dimension, you can use other custom document components (such as subscription controls) to navigate through Page axis dimension members.

To control freeform grid content using another data object, you must perform these steps:



1. Create a custom document with a freeform grid.
2. Switch to Analyze mode, right-click and add a data source to the grid.
3. Return to Document Designer, and add another data object to the custom document.
4. The second data object must use the data source used by the freeform grid.
5. Switch to Analyze mode again.

At this point, you have a custom document with a freeform grid and another data object, both of which use a common database connection. You can now apply client-side formatting and analysis tools definitions to the data object. Because the freeform grid's database connection and query match those used by the data object, it reflects all changes to the data object. When you are done formatting the content, you have three options:

- You can leave the data object on the document, as a control.
- You can delete the data object. The grid maintains its state based on the database connection and query, but you cannot revise the grid.
- You can hide the data object by sizing it down, or obscuring it behind another component (send to back). Later, if you revise the grid, you can use the data object control again.

Note: Formula cell addresses are absolute. They do not dynamically change themselves to accommodate the displacement caused by navigation from a second data object sharing one database connection. Changing the content of a freeform grid, may render formulas obsolete.

► To control freeform grid content using another data object:

- 1 **Start Web Analysis Studio.**
- 2 **Perform one:**
 - Select **File**, then **New**, then **Document**.
 - Click .
 - Click , and select **Document**.

- In the View Pane **Browser** tab, right-click a document and select **Edit**.
- Press **Ctrl+N**.

The Document Designer is displayed.

3 Drag the **Freeform Grid icon from the component toolbar to a document panel.**

An empty freeform grid and the Set Grid Size dialog box are displayed. Note that the grid can consist of only row and column axes.

4 Enter the number of rows and columns in the corresponding text area, and click **OK.**

The grid is reset to the indicated number of rows and columns. Note that the freeform grid is selected, and displays blue selection handles.

5 Click .

Data sources are anchored at cells in a freeform grid. This is done by selecting a cell and composing a query.

6 To specify an OLAP or Oracle | Hyperion data source, right-click a cell and select **Add Data Source.**

The Select Data Source dialog box is displayed. You can select a database connection, or select **<Add Data Source>** to select another database connection. When you are done the query is submitted and the result set is displayed in the freeform grid. It is important to note the name of the data source displayed at the result set origin.

7 Click .

8 Drag the **Spreadsheet icon from the component toolbar to the document panel.**

The Data Object Properties dialog box is displayed.

9 Select the data source used by the freeform grid for this data object, and click **OK.**

This is the data source displayed at the result set origin on the freeform grid.

10 Click .

Your custom document contains a freeform grid and another data object, both of which use a common database connection. You can now apply client-side formatting and analysis tools definitions to the data object. Because the freeform grid's database connection and query matches those used by the data object, it reflects all changes to the data object.

In This Chapter

| | |
|---|-----|
| Comparing Web Analysis Studio and EPM Workspace | 211 |
| Document Designer | 213 |
| Custom Document Components | 215 |
| Formatting Components | 218 |
| Creating Hotspots | 223 |
| Creating Split Panels | 223 |
| Linking Components by Query | 224 |
| Linking Selected Dimensions | 225 |
| Creating Subscription Controls | 226 |
| Creating Selection Buttons | 229 |
| Creating Dynamic Text Labels | 231 |
| Custom Document Components | 234 |

Comparing Web Analysis Studio and EPM Workspace

Web Analysis Studio is a Java applet that enables you to create, analyze, present, and report multidimensional content. The studio offers the complete Web Analysis feature set to designers creating content (including dashboards).

EPM Workspace is a DHTML based, zero-footprint client that provides a user interface for viewing and interacting with content created by authoring studios and enables users to create queries against relational and multidimensional data sources. It is engineered for information consumers who do not require advanced design and content-creation capabilities.

Differences between the Two Clients

- The scrolling feature on charts is not available in EPM Workspace.
- Because Java fonts and HTML fonts are not one-to-one equivalent, font styles and sizes may differ.
- Label Text and Text Area static placement may not be observed and it is recommended that you use the anchoring feature as much as possible.
- EPM Workspace does not render these designer components:
 - Tab selection controls

- Slider selection controls
- Splitter panels

Note: Splitter panel render in HTML as a two pane panel, however splitter bar and One-Touch Expandable functionality not render in HTML.

- These Service Buttons do not function in EPM Workspace:
 - Assign Edit Data
 - Close Report
 - Data Layout
 - Desktop
 - File Open
 - Home
 - Launch Executable
 - Logout
 - Print
 - Save As
 - Send to Clipboard
 - Send to Excel
 - Toggle Info Panel
 - Toggle Masthead
 - Toggle Menu
 - Toggle Status Bar
 - Toggle Toolbar
 - User Preferences

Font List Differences Between Web Analysis Studio and EPM Workspace

Font availability dependencies in Web Analysis Studio and EPM Workspace:

- **Web Analysis Studio**—Font list is generated from client machine installed fonts
- **EPM Workspace**—Font list is generated from Web Analysis server machine installed fonts



Note: If a document is created in Web Analysis Studio that uses a font that is installed only on the client machine and is not installed on the Web Analysis server, EPM Workspace users cannot see that font.

Document Designer

The Document Designer creates custom documents. When in Document Designer, the process bar displays the Design label, and a component toolbar is displayed below the menu bar. Document Designer access is controlled cumulatively by user and group roles.

Accessing Document Designer

You can create custom documents from scratch, the current document, or from document that you can access.

- To initiate Document Designer:
 - Select **File**, then **New**, then **Document**.
 - In **Analyze**, click , and select **Document**.
 - In **Analyze**, click .
 - Press **Ctrl+N**.
 - Press **F12**.

- To initiate Document Designer for the current document in **Analyze**, click **Switch to Document Designer**.

- To open document in Document Designer, perform these actions:
 - 1 Select **View**, then **View Pane**, or press **F6**.
The View Pane is displayed.
 - 2 Click the **Repository** tab.
 - 3 Navigate to the document to edit in **Document Designer**.
 - 4 Right-click the document name, and select **Edit**.

The document is opened in Document Designer, and assigned default object properties. For a description of default object properties, See [“Formatting Components” on page 218](#).

Setting Document Designer Options

Before designing custom documents, set these options:

- To show or hide the Document Designer point grid on the master panel, select **View**, then **Grid Toggle**.

- To set the color for the Document Designer grid points on the master panel:
 - 1 Select **View**, then **Grid Color**.

The Select Color dialog box is displayed.

- 2 Select a color from the **Swatches** tab, and click **OK**.

For a complete description of color options, See [“Selecting Color” on page 110](#).

- To set a background image for the Document Designer master panel:

- 1 Select **View**, then **Load Image**.

The Select Graphic dialog box is displayed. You can select a color to fill the panel, or a graphic background for the panel (using **Load**). The **Style** group box controls image placement inside the master panel. **Clear** resets the panel to the default grey background.

- 2 Select one **Style** option:

- **Center**—Centers the image horizontally on the master panel.
- **Stretch**—Stretches the image to the height and width of the master panel.
- **Tile**—Repeats the image across the master panel until the area is covered.
- **Top-Left**—Anchors the image in the top left corner of the master panel.

- 3 Click **Load**.

The Open dialog box is displayed.

- 4 Navigate to a network location and select a **JPG** or **GIF** file.

- 5 Click **Open**.

The image is displayed on the master panel as specified by the **Style** option.

Design for HTML

When creating custom Web Analysis documents, you can restrict objects and functionality that do not appear in the EPM Workspace rendering of Web Analysis documents. Incompatible controls such as Tab Control and Slider Bar, and some Service Buttons, are disabled and not available to add to a Web Analysis document.

- To create Web Analysis documents for EPM Workspace HTML rendering:

- 1 From the main menu, select **Edit**, then **Design for HTML**.

- 2 Select **Design for HTML** option and click **OK**.

Note: Incompatible EPM Workspace objects are not enabled ([“Comparing Web Analysis Studio and EPM Workspace” on page 211](#) for a list of incompatible objects).

- 3 If objects are overlaid (For Example, a Text Label placed on top of a Spreadsheet), the overlaying objects that do not render in HTML and are highlighted with a (red) border.

Note: If incompatible controls are added when this mode is deselected, “Design for HTML mode” is enabled and the control is highlighted with a (red) border

Accessing the Palette Tab

The Palette tab is one of three View Pane tabs.

It lists custom document components as a node tree. You can expand, collapse, and explore the node tree to identify components by name, understand how they are nested, and display component properties.

- To display a node tree of custom document components, select **View**, then **View Pane** (or press F6), and click .

Custom Document Components

Web Analysis Studio provides an inventory of coding-free components for custom documents. Twenty-one components can be added to custom documents multiple times, and customized using various options. This provides numerous creative opportunities for custom document designers:

Containers

The [Panel Object](#) and [Split Panel Object](#) control space and layers on custom documents. Design documents using container panels and orient components inside these panels.

Content Panels

There are four additional panels that provide specialized content:

- [Label Object](#)—contains static or dynamic text for titles, labels, or captions.
- [Text Area Object](#)—uses dynamic text to annotate documents.
- [Image Objects](#)—contain graphics for backgrounds, pictures, illustrations, and graphic controls.
- [HTML Browser Object](#)—displays static HTML.

These panels function without additional coding. The label object supports the dynamic text labels used in Printing headers and footers, and SQL spreadsheets.

Four Data Objects

Data objects representing four display types are next on the component toolbar:

- [Chart](#)—displays the query result set as a chart.
- [Spreadsheet](#)—displays the query result set as a spreadsheet.
- [Freeform Grid](#)—displays content from multiple data sources in one spreadsheet.

- **Pinboard**—displays the query result set as a pinboard.

The SQL Spreadsheet data object is in the last segment of the component toolbar. See also [Chapter 15, “Creating Freeform Grids.”](#)

Subscription Controls

A variety of controls enable you to navigate dimensional hierarchies, browse documents, and execute commands:

- **Combo Box Subscription**—displays a member drop-down list.
- **Radio Button Group Subscription**—enables you to select one dimension member option from a series.
- **Check Box Group Subscription**—enables you to select multiple dimension members.
- **Tab Group Subscription**—enables you to select one dimension member tab from a series.
- **Multi-level Combo Box Subscription**—enables you to select from interdependent drop-down lists, whose members change based on previous selections.
- **Slider Subscription**—enables you to select one dimension member from a series.
- **Selection Button Subscription**—displays a control that applies dimension member selections to data objects using a matching data source.
- **Alias Controller Object**—enables you to toggle the data object between alias table labels.
- **Services Button Object**—executes a command. Also used to create hotspots.

All subscription buttons can control data objects that share a common database connection query.

SQL Spreadsheet and SQL Subscription

Two components present and control SQL query result sets:

- **SQL Spreadsheet Objects**—displays a SQL query from a relational data source.
- **SQL Subscription Objects**—displays a relational subscription button.

See [Chapter 14, “Creating SQL Spreadsheets.”](#)

Creating Container Panels

Design custom documents using container panels. As they are added to panels, components are anchored to one panel edge. Using Slack alignment, you can realign objects to occupy all empty space.

Components placed with absolute alignment in the main document panel maintain their position as other components fluctuate. This may cause overlapping and shifting components.

To prevent this, subdivide custom document space using panels, and anchor these panels to the master panel. Subsequently added components in container panels maintain their arrangement.

Adding Custom Document Components

- To add custom document components to a document, drag them from the component toolbar to a document panel.

Undo and Redo

The Undo command reverses the effect of the previous command, returning the display to its prior state. The Redo command reverses Undo, and reinstates the command executed before Undo. Document Designer records the last ten design actions in a series, and enables you to select multiple commands to undo or redo.

- To undo or redo multiple commands, select them from the Undo and Redo drop-down lists.

Selecting Components

- To make a component current, click it. The current component is outlined in blue.

Selecting Multiple Components


- To select multiple components:
 - Hold Ctrl while clicking the components.
 - Click and drag a box around multiple components.

Sizing Components

- To size a selected component, drag the blue selection handles on the corners and edges of the selection outline.



Moving Components

- To move selected component, drag the component with the Move cursor, , to another location.

The conventional cursor is transformed into the Move cursor when it is floated over a selected component. Be careful not to drag over a blue selection handle, as this resizes the component instead of moving it.

Cutting, Copying, Pasting, and Deleting Components

- To edit custom documents, right-click a selected custom document component, and select **Edit**, then **Cut**, **Copy**, **Paste**, or **Delete** from the shortcut menu.

You can also select a component by clicking it and using these hot keys:

- Undo—**Ctrl+Z**
- Redo—**Ctrl+Y**
- Cut—**Ctrl+X**
- Copy—**Ctrl+C**
- Paste—**Ctrl+V**
- Delete—Press **Delete**.

Formatting Components

Components feature a shortcut menu, the primary means of formatting and editing. All menus are identical with the exception of component-specific Custom Settings commands:

| Command | Submenu | Description |
|----------------|---------|---|
| Bring to Front | | Brings the selected object to the top and front when objects are layered. |
| Send to Back | | Sends the selected object to the bottom and back when objects are layered. |
| Edit | | |
| | Cut | Removes the selected object to the clipboard. |
| | Copy | Saves the selected object to the clipboard. |
| | Paste | Pastes content from the clipboard into the selected object. |
| | Delete | Deletes the selected component. |
| Opaque | | Makes the selected object opaque when selected, or transparent when deselected. |

| Command | Submenu | Description |
|----------------|--------------------|---|
| Border | | |
| | Etched | Sets object borders to an etched style. |
| | Line | Sets object borders to a solid line. |
| | Lowered Bevel | Sets object borders to a lowered bevel style. |
| | Raised Bevel | Sets object borders to a raised bevel style. |
| | None | Removes object borders. |
| | Set Border Color | Sets line border color. |
| | Set Border Size | Sets the (interior) component line border width in pixels. Zero (0) means no border. |
| Anchor | | |
| | Top | Affixes objects to the top edge of the panel. |
| | Bottom | Affixes objects to the bottom edge of the panel. |
| | Left | Affixes objects to the left edge of the panel. |
| | Right | Affixes objects to the right edge of the panel. |
| | Slack | Sizes the component to fill unused space. |
| | None | Positions the component, using the underlying pixel grid. |
| Align | | |
| | Top Edges | Aligns the top edge of all selected components. Moves all selected components vertically to the current position of the top edge of the top object. |
| | Vertical Centers | Aligns the center point of all selected components. Center in this case is the vertical center (left and right edges of components). Moves all selected components vertically to a median determined using the top edge of the top component and the bottom edge of the bottom component. |
| | Bottom Edges | Aligns the bottom edges of all selected components. Moves all selected components vertically to the current position of the bottom edge of the bottom object. |
| | Left Edges | Aligns the left edge of all selected components. Moves selected components horizontally to the current position of the left edge of the left object. |
| | Horizontal Centers | Aligns the center point of all selected components. Center in this case is the horizontal center (top and bottom edges of components). Moves all selected components horizontally to a median determined using the left edge of the left component and the right edge of the right component. |
| | Right Edges | Aligns the right edge of all selected components. Moves all selected components horizontally to the current position of the right edge of the right object. |
| Distribute | | |
| | Top Edges | Evenly spaces the top edge of three or more components vertically. |

| Command | Submenu | Description |
|-----------------|--------------------|---|
| | Vertical Centers | Evenly spaces the center point of three or more components. Center in this case is the vertical center (left and right edges of components). Moves all selected components vertically to a median determined using the top edge of the top component and the bottom edge of the bottom component. |
| | Bottom Edges | Evenly spaces the bottom edge of three or more components vertically. |
| | Left Edges | Evenly spaces the left edge of three or more components horizontally. |
| | Horizontal Centers | Evenly spaces the center point of three or more components. Center in this case is the horizontal center (top and bottom edges of components). Moves all selected components horizontally to a median determined using the left edge of the left component and the right edge of the right component. |
| | Right Edges | Evenly spaces the right edge of three or more components horizontally. |
| Custom Settings | | Displays additional component-specific commands. Options are described in component profiles. |
| Font Properties | | Displays the Font Properties dialog box to format caption fonts. |
| Properties | | Displays the component-specific property dialog box, or a series of dialog boxes. |

Default Object Properties

Default properties are assigned to documents imported into Document Designer:

| Property | Default | Implications |
|------------------------|--------------|--|
| Opaque | Enabled | The object obscures other objects behind it. |
| Border | Etched | All objects feature a default border. |
| Anchor | Slack | Change the alignment property, if you intend to resize the data object. |
| Data Object Properties | Data Source | Be aware that all objects using one data source are coordinated. Navigation in object affects all objects using one data source. |
| | Display Type | To change display type, select Properties from the shortcut menu. |

Setting the Background

To create a uniform background for the custom document, you must create a panel object, and anchor the panel to fill all slack space. You can set the background to a color or arrangement of images. Every custom document begins with a master panel. See [“Setting Document Designer Options” on page 213](#).

► To set a background image for a panel:

- 1 Right-click a panel, and select **Properties**.

The Select Graphic dialog box is displayed. You can select a background color, or a graphic background for the panel (using **Load**). The **Style** group box controls image placement. **Clear** resets the panel to the default grey background.

2 Select one **Style option:**

- **Center**—Centers the image horizontally on the master panel.
- **Stretch**—Stretches the image to the height and width of the master panel.
- **Tile**—Repeats the image across the master panel until the area is covered.
- **Top-Left**—Anchors the image in the top left corner of the master panel.

3 Click **Load.**

The Open dialog box is displayed.

4 Navigate to a network location containing graphic JPG or GIF files, and select a file.

5 Click **Open.**

The image is displayed on the master panel as specified by the **Style** option.

Aligning Components

Components are positioned relative to the panel containing them. Document designers edit relative component positioning and spacing using alignment controls.

- To align components, right-click the component and select a shortcut menu option.

Anchor Options

The **Anchor** property orients selected components to an edge of the panel containing them. Using **Slack** alignment, you can realign objects to occupy empty space.

Design documents using container panels and orient components inside these panels. Components placed with absolute alignment in the main document panel maintain their position as other components fluctuate. This may cause overlapping and shifting components.

Relative Alignment

Anchored components can also be positioned relative to other components. For example, selection buttons anchored to the left edge of the panel may nevertheless be unevenly spaced.











Align and **Distribute** controls position components and space components relative to edges or center points.



Spacing Options

Spacing components using the **Distribution** feature does account for object size or space between objects, only for space between edges or center points.

Spacing between object sizes that differ may vary, even when an edge of three or more components is evenly spaced.

Alignment Options

| Shortcut Command | Description |
|--|---|
| Anchor | |
| Top | Affixes objects to the top edge of the panel. |
| Bottom | Affixes objects to the bottom edge of the panel. |
| Left | Affixes objects to the left edge of the panel. |
| Right | Affixes objects to the right edge of the panel. |
| Slack | Sizes the component to fill unused space. |
| None | Positions the component, using the underlying pixel grid. |
| Align | |
|  Top Edges | Aligns the top edge of all selected components. Moves all selected components vertically to the current position of the top edge of the top object. |
|  Vertical Centers | Aligns the center point of all selected components. Center in this case is the vertical center, evenly spaced from the left and right edges of components. Moves all selected components vertically to a median determined using the center of the top component and the center of the bottom component. |
|  Bottom Edges | Aligns the bottom edge of all selected components. Moves all selected components vertically to the current position of the bottom edge of the bottom object. |
|  Left Edges | Aligns the left edge of all selected components. Moves all selected components horizontally to the current position of the left edge of the left object. |
|  Horizontal Centers | Aligns the center point of all selected components. Center in this case is the horizontal center, evenly spaced from the top and bottom edges of components. Moves all selected components horizontally to a median determined using the center of the left component and the center of the farthest right component. |
|  Right Edges | Aligns the right edge of all selected components. Moves all selected components horizontally to the current position of the right edge of the farthest right object. |
| Distribute | |
|  Top Edges | Evenly spaces the top edge of three or more components vertically. |
|  Vertical Centers | Evenly spaces the center point of three or more components. Center in this case is the vertical center, evenly spaced from the left and right edges of components. Moves all selected components vertically to a median determined using the center of the top component and the center of the bottom component. |
|  Bottom Edges | Evenly spaces the bottom edge of three or more components vertically. |
|  Left Edges | Evenly spaces the left edge of three or more components horizontally. |

| Shortcut Command | Description |
|--|--|
|  Horizontal Centers | Evenly spaces the center point of three or more components. Center in this case is the horizontal center, evenly spaced from the top and bottom edges of components. Moves all selected components horizontally to a median determined using the center of the farthest left component and the center of the farthest right component. |
|  Right Edges | Evenly spaces the right edge of three or more components horizontally. |

Creating Hotspots

► To create a hotspot:

- 1 Drag a **Services** button from the component toolbar to the document panel.

The Service Properties dialog box is displayed.

- 2 Select a service type from the **Select Service Type** list.

The Service button features a gray color and border and an opaque text label by default.

- 3 If you do not want a text label, delete the default label text.

- 4 To indicate a border color, click the **Color** button.

The Select Color dialog box is displayed, enabling the selection of a color for the button and the border.

- 5 Click **OK** to return to the Service Properties dialog box.

The button and the border displays the selected color. If you want transparent hotspots with colored borders, you must finish creating the service button, and disable the opaque property on the service button shortcut menu.

- 6 Click **OK**.

The Service button can be sized and located, for component.

Note: Use the Bring to Front shortcut menu command to locate hotspots on other objects.

Creating Split Panels

► To create a split panel (a panel with a movable splitter bar):

- 1 In Document Designer, drag a **Split Panel** object from the component toolbar onto the content area.

The Split Panel Properties dialog box is displayed.

- 2 Select a horizontal or vertical splitter bar from the **Orientation** radio button group.

- 3 **Optional:** In the **Sizing** group, select **One-Touch Expandable** to add controls to the splitter bar.

The Splitter bar is the slider that divides the split panel. When the One-Touch Expandable option is selected, two arrow controls move the splitter bar in opposing directions with one click.

- 4 **Optional:** In the **Background Images** group, click **Left/Right** or **Top/Bottom**, to display the Select Graphic dialog box for that half of the Split Panel.

You can set a color for the specified half of the split panel, or load a background image in it. See [“Selecting Graphics” on page 111](#).

- 5 Click **OK**.

Nesting Split Panels

By dragging a Split Panel object onto another Split Panel object, you can nest split panels inside one another. This enables you to use horizontal and vertical splitter bars simultaneously.

Retrieving Focus From Slack Space Split Panels

Focus must be removed from the split panel before the slider bar can be adjusted. When the split panel alignment is set to Slack Space, the split panel controls the document, and you cannot click outside the split panel. In this case, click the Splitter bar until the Split panel is deselected.

Linking Components by Query

To create a document you are required to specify:

- Data source—Provides data values
- Data object—Displays these values
- Query—Gets data values from the data source and returns them to the data object.

To set properties customizing these elements:

- Database Connection Properties indicate the type of data source, logon credentials, database applications, dimension formatting and drill-through properties.
- Each data object can be set to a display types that features formatting options.
- Queries can be explicit, requesting information on dimension members, or dynamic, requesting information about dimension member that satisfies a set of criteria.

In Document Designer, the query definition is referred to as the data source.

Common Data Sources

Components using one data source are coordinated. Component navigation requires all components using one data source to follow common lines of navigation.

To link dimension in data objects in one document, use Custom Settings. See “[Linking Selected Dimensions](#)” on page 225.

Unlinking Components

If you do not want coordinated components, assign another data source to an object. Identical data sources with names that differ are treated separately.

Linking Selected Dimensions

Use Custom Settings to link dimensions in data objects in one document.

Dimensional linking enables data objects sharing dimensions to remain coordinated regardless of data source. Links are unidirectional; navigation on a data object triggers coordinated navigation on other data objects linked to it. Data objects without defined links do not mutually trigger navigation.

➤ To locate data object custom settings, enter Document Designer and right click a data object.

| Data Object Custom Settings | Description |
|-----------------------------|---|
| Add/Show Data Source Link | Places the data objects in the current document into Data Source Link mode. |
| Remove Data Source Link | Deletes all data source links in the selected data object. |

➤ To link selected dimensions of data objects in one document:

1 Enter Document Designer.

2 Right-click the data object from which links are to be driven.

Links are unidirectional. Bidimensional and multidimensional links must be created by repeating this procedure on each data object. Components using one data source are also coordinated, but these links are not dimension-specific.

3 Select Custom Settings, then Add/Show Data Source Link.

The data object borders are red, green or black.

- Red borders—Indicate the data objects share a data source.
- Green borders—Indicate the data objects available for dimensional linking.
- Black borders—Indicate the data objects with previously defined links.

Black-bordered objects cannot be used to define links. You must remove the link definitions before defining link definitions.

Red-bordered objects share a data source. All dimensions are coordinated.

4 Click a green-bordered object.

The Select Dimensions dialog box is displayed.

5 Click a check box to select a dimension.

You can select multiple dimensions.

6 Click **OK.**

You are returned to Document Designer. You must return to Analyze before demonstrating linking behavior.

Creating Subscription Controls

You can create five controls using one procedure:

- [Combo Box Subscription](#)
- [Radio Button Group Subscription](#)
- [Check Box Group Subscription](#)
- [Tab Group Subscription](#)
- [Slider Subscription](#)

There are alternative procedures for customizing:

- [Multi-level Combo Box Subscription](#)
- [Selection Button Subscription](#)
- [SQL Subscription Objects](#)

There is also a procedure for making subscription controls dependent on other subscription controls.

Subscription Control Dialog Sequence

After creating a control, an automated dialog sequence helps you set properties:

- The Select Data Source prompts you to relate the control to a data source (query).
- The Select Dimension dialog box prompts you to select a dimension from the query.
- The Select Member dialog box prompts you to specify members and formatting options.

Creating Subscription Controls

► To create subscription controls:

1 Drag a Subscription control object from the component toolbar to the content area of the custom document.

The Select Data Source dialog box is displayed.

2 Click to select a data source.

The Make Dependent option makes the subscription controls dependent on other controls sharing this data source. See [“Creating Dependent Subscription Controls” on page 229](#).

3 Click OK.

The Select Dimension dialog box is displayed.

4 Select a dimension name, and click OK.

The Select Member dialog box is displayed.

5 Click Add.

The Dimension Browser for the selected dimension is displayed.

6 Make member selections, and click OK.

Selected members display in the Select Member dialog box. You can also select font properties, color properties, and rename the dimension member labels. The first dimension member in the panel is used as the button label, so it is often helpful to rename the member to a more descriptive label.

These optional subscription control procedures are also available:

- [Ordering Dimension Member Controls](#)
- [Indenting Dimension Member Controls](#)
- [Changing Data Sources](#)
- [Creating Dynamic Dimension Member Controls](#)
- [Creating Dependent Subscription Controls](#)

7 Click OK.

The dimension member control is displayed on the custom document.

Ordering Dimension Member Controls

- To reorder member controls, select a member name and use the arrow buttons to move the member in the index order. The order of members is reflected in the custom document when you Click OK.

Indenting Dimension Member Controls

When creating check box and radio button group subscription controls, you can indent dimension member controls a number of pixels based on each members level from the top of the dimension hierarchy.

- To indent dimension member controls, open **Select Members** and select **Indent Members**.

Saving Subscription Control Selections to User POVs

User POVs enable users to select members in Filters, Pages, Rows, and Columns (Data Layout and/or member selection controls) and apply them to multiple Web Analysis documents.

All Subscription controls have “Save Selection as User POV” option. When a selection is made on the control, it is automatically saved to the User POV as a filter. If the Subscription control points to multiple `ReportDataSrcs`, all of the underlying Database Connections have their User points of view set for the dimension that the control applies to.

In order for a Web Analysis document to utilize the User POV selection, the option “Use User POV” must be enabled in the Data Layout / Options dialog.

Enabling a Subscription Control to “Activate from Service Button”

This feature allows for Subscription Control member selections to be made, and performs a data retrieval by clicking the Service Button. Users can make multiple Subscription Control selections without retrieving data for each selection. Subscription Control’s Properties / Select Members dialog has a option to “Activate From Service Button”. A Service Button for “Apply Subscriptions” must be added to the Web Analysis document to perform data retrieval after making Subscription Control selections.

Changing Data Sources

- To change the data source for a dimension member control, click **Relink**.

The Select Data Source dialog box is displayed.

Creating Dynamic Dimension Member Controls

You can define dimension member controls using an explicit selection or advanced member selection, and use advanced member selections to populate the control. Using advanced member selection to populate a control makes the control dynamic. As members are added deleted and changed in the database, the control maintains itself and does not become obsolete.

For example, you can create a Product dimension member control. You can make a children of Product dimension member control, and you can make a control that displays the Children of Product, whatever they are.

- To create a dynamic dimension member control, select **Dynamic** in **Member**. Dynamic dimension members must utilize an advanced member selection.

Creating Dependent Subscription Controls

You can make subscription controls dependent on other controls sharing a data source. This enables you to create a chain of dependent subscription controls, where dimension member selections in a subscription control prompt the display of the selection's children in dependent controls. Multiple dependent controls can be created to reflect the depth of the dimension hierarchy.

Because check box subscription controls enable multiple member selection, they cannot be used by dependent subscription controls. You are warned when you attempt to delete a subscription control with dependent controls, as dependent controls do not function without the primary subscription control.

- To create a dependent subscription control for a subscription control:
 - 1 Drag a subscription control object from the Custom Document component toolbar to a document panel.**
The Select Data Source dialog box is displayed.
 - 2 Select **Make Dependent**.**
Primary subscription controls are displayed.
 - 3 Click to select a subscription control and click **OK**.**
The dependent subscription control is displayed on the custom document. It is populated with the children of the primary subscription control when selections are made.

Creating Selection Buttons

The Selection Button object creates a control button coordinated with other objects in the document using a common data source. Selection button properties differ from other subscription controls.

- To create a selection button:
 - 1 Drag the Selection Button object from the component toolbar to the content area of the custom document.**
The Select Data Source dialog box is displayed.
 - 2 Click to select a data source.**
The selection button is coordinated with the data objects sharing one data source.
The Make Dependent option makes the control dependent on other controls sharing this data source. See [“Creating Dependent Subscription Controls” on page 229](#).
 - 3 Click **OK**.**

The Select Dimension dialog box is displayed.

4 Select a dimension name, and click **OK.**

The Select Member dialog box is displayed.

5 Click **Add.**

The Dimension Browser for the selected dimension is displayed.

6 Make member selections, and click **OK.**

The selected members display in the Select Member dialog box. You can select font properties, color properties, and rename the dimension member labels. The first dimension member in the panel is used as the button label, so it is often helpful to rename the member to a more descriptive label.

You can define dimension member controls using an explicit selection or advanced member selection. In addition, you can use advanced member selections to populate the control. Using advanced member selection to populate a control makes the control dynamic. As members are added deleted and changed in the database, the control maintains itself and does not become obsolete.

These optional subscription control procedures are also available:

- [Ordering Dimension Member Controls](#)
- [Creating Extended Mode Controls](#)
- [Renaming Dimension Member Buttons](#)

7 Click **OK.**

Ordering Dimension Member Controls

- To reorder member controls, select a member name and use the arrow buttons to move the member on the index panel. The order of members is reflected in the custom document, when you click **OK**.

Creating Extended Mode Controls

The Extended Mode option enables you to make live member selections, when you review the custom document. Clicking the selection button in Analyze presents another Select Member dialog box that contains options for defined member selections. You can select and display members ad hoc.

- To create an extended mode dimension member control, select **Extended Mode**.

Renaming Dimension Member Buttons

You can rename member text labels on custom controls (combo box, radio button group, check box, tab series, slider bar, and selection button) in the course of setting the data source (query), selecting a dimension from the query, and specifying members.

- To rename member text labels, click **Rename Button** on the Select Member dialog box. When the Enter Member's Display Name dialog box is displayed, enter a text label and click **OK**.

Creating Dynamic Text Labels

- To create dynamic text labels:
 - 1 In **Document Designer**, drag a label object from the component toolbar onto the content area of the custom document.
The Insert Text dialog box is displayed.
 - 2 Right-click **Caption** and select a dynamic text label from the shortcut menu.
 - 3 Click **OK**.

Dynamic Text Labels

Dynamic text labels are variables that are dynamically replaced with values at runtime. Dynamic text labels display the latest information without being manually updated

You can use Dynamic Text Labels to create these dynamically updated components:

- Labels—Add dynamic text labels to label objects using the shortcut menu. See [“Label Object” on page 235](#).
- Headers and footers—For your JPG, PDF and hardcopy output, use dynamic text labels in the Print dialog box Headers/Footers tab. See [“Print Dialog Header/Footer Tab” on page 150](#).
- SQL statements—Include dynamic text labels in your SQL filter clauses as values. See [“SQL Spreadsheets” on page 193](#).

| Dynamic Text Tag | Default Tag | Inserts this item in the label object: |
|------------------|--------------|--|
| Database Note | <<dbnote>> | A database note |
| Cell Reference | <<cell 0,0>> | A cell reference string |
| Page | <<page>> | A page dimension name |

| Dynamic Text Tag | Default Tag | Inserts this item in the label object: |
|----------------------|---------------------|--|
| Filter | <<filter 0>> | A filter member name |
| Document Description | <<rd>> | A document description string |
| Document Name | <<rn>> | A document name string |
| Date/Time | <<date,MM-dd-yyyy>> | A date/time string |
| Connection Name | <<cn>> | A database connection name string |
| Username | <<username>> | A user name string |
| UserID | <<userid>> | A User ID string |

After dynamic text labels are placed in the Insert Text dialog box, you can edit tags to display additional information.

For information on Dynamic Text Labels for SQL Spreadsheet, See [“Dynamic Text Labels for SQL Spreadsheets” on page 201](#).

Fixed References

Because dynamic text labels change as focus is shifted in composite documents, you may want to fix dynamic references. Tags can be associated with specified data sources using these modifications:

| Dynamic Text Tag | Default Tag | Fixed Reference |
|------------------|--------------|------------------------------|
| Connection Name | <<cn>> | <<cn DataSourceName1>> |
| Cell Reference | <<cell 0,0>> | <<cell DataSourceName1,0,0>> |
| Filter | <<filter>> | <<filter DataSourceName1,0>> |
| Pages | <<page>> | <<page DataSourceName1>> |
| Database Note | <<dbnote>> | <<dbnote DataSourceName1>> |

Note: It is not possible to specify a fixed references for a page dimension member.

Time Format Syntax

Time Format strings specify the format of the dynamic date/time label. The number and order of ASCII characters determines the format used:

| ASCII Symbol | Meaning | Type | Example |
|--------------|---------|------|---------|
| G | Era | Text | AD |

| ASCII Symbol | Meaning | Type | Example |
|------------------|----------------------|---------------|-----------------------------|
| y | Year | Number | 2002 |
| M | Month in Year | Text & Number | July & 07 |
| d | Day in Month | Number | 10 |
| h | Hour in am/pm (1-12) | Number | 12 |
| H | Hour in Day (0-23) | Number | 0 |
| m | Minute in Hour | Number | 30 |
| s | Second in Minute | Number | 55 |
| S | Millisecond | Number | 978 |
| E | Day in Week | Text | Tuesday |
| D | Day in Year | Number | 189 |
| F | Day of Week in Month | Number | 2 (meaning 2nd Wed in July) |
| w | Week in Year | Number | 27 |
| W | Week in Month | Number | 2 |
| a | am/pm marker | Text | PM |
| k | Hour in Day (1-24) | Number | 24 |
| K | Hour in am/pm (0-11) | Number | 0 |
| z | Time Zone | Text | Pacific Standard Time |
| ' (apostrophe) | Escape for Text | Delimiter | |
| ' (single quote) | Single Quote | Literal | ' |

When four or more characters are used, a completely spelled value is returned.

When three or more Text & Number types letters are used, text is provided. When only one or two letters are provided for this type, the number is provided.

Numbers use the minimum number of digits. Year can be truncated to two digits. Shorter numbers are zero-padded.

All other characters are used as quoted text strings.

Examples

"yyyy.MM.dd G 'at' hh:mm:ss z" returns 1996.07.10 AD at 15:08:56 PDT

"EEE, MMM d, 'yy" returns Wed, July 10, '96

"h:mm a" returns 12:08 PM

"yyyyy.MMMMM.dd GGG hh:mm aaa" returns 1996.July.10 AD 12:08 PM

Custom Document Components

This section describes each custom document component:

- [Panel Object](#)
- [Split Panel Object](#)
- [Label Object](#)
- [Text Area Object](#)
- [Image Objects](#)
- [HTML Browser Object](#)
- [Combo Box Subscription](#)
- [Radio Button Group Subscription](#)
- [Check Box Group Subscription](#)
- [Tab Group Subscription](#)
- [Slider Subscription](#)
- [Selection Button Subscription](#)
- [Multi-level Combo Box Subscription](#)
- [Alias Controller Object](#)
- [Services Button Object](#)
- [SQL Spreadsheet Objects](#)
- [SQL Subscription Objects](#)

Panel Object

The Panel object creates an empty container for dividing space in the document.



Panel object properties are set using the Select Graphic dialog box. See [“Adding Custom Document Components”](#) on page 217.

Using Panels for Object Placement

To fit Web Analysis documents to any screen resolution and to help with object-placement differences between Web Analysis Studio and EPM Workspace, use a panel or split panel object. On the panels, the report designer sets the anchor to Top, Bottom, Left, Right, or Slack:

- Top or Bottom—Anchors the object to the top or bottom of the panel respectively. Thus, the object expands its width to the panel size; however, the height does not change.
- Left or Right—Anchors the object to the left or right of the panel respectively. Thus, the object expands its height to the panel size; however, the width does not change.
- Slack —Consumes all available space in the panel. Thus, it expands its height and width to the panel size.

Split Panel Object

The Split Panel object creates two coordinated panels separated by a splitter bar. See [“Creating Split Panels” on page 223](#)

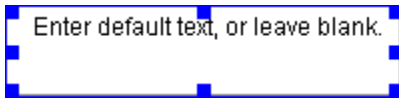
| Control | Description |
|--------------------------------|--|
| Orientation | |
| Horizontal | Sets the Splitter bar to a horizontal orientation that coordinates a top and bottom panel. |
| Vertical | Sets the Splitter bar to a vertical orientation that coordinates a left and right panel. |
| Properties | |
| One-touch Expandable | Enables the Splitter bar to jump to the opposite panel with one click. |
| Set Current Sizes As Preferred | Enables you to position the Splitter bar using the pixel grid. The Split Panel definition is updated when you click OK , and this setting is refreshed each time the dialog is displayed. |
| Background Images | |
| Left | Displays the Select Graphic dialog box to set the background image of the left panel when the Splitter bar is vertical. |
| Right | Displays the Select Graphic dialog box to set the background image of the right panel when the Splitter bar is vertical. |
| Top | Displays the Select Graphic dialog box to set the background image of the top panel when the Splitter bar is horizontal. |
| Bottom | Displays the Select Graphic dialog box to set the background image of the bottom panel when the Splitter bar is horizontal. |

Label Object

The Label object creates static or dynamic text for use as a title, label, or caption. You can enter label text in the Label Caption dialog box. See [“Adding Custom Document Components” on page 217](#) or [“Creating Dynamic Text Labels” on page 231](#).

Text Area Object

The Text Area object creates a dynamic text box used for annotating documents.



You are prompted to populate the text object with a default text string with the Enter Default Text dialog box.

Image Objects

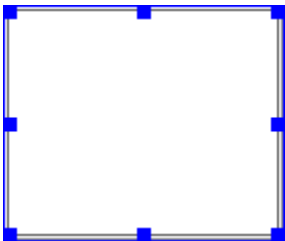
The Image object creates a graphic. This enables you to create backgrounds, pictures, illustrations, and graphic controls.



Image object properties are set using the Select Graphic dialog box. Graphic controls are created in conjunction with the Services Button object. See [“Creating Hotspots” on page 223](#) or [“Services Button Object” on page 239](#).

HTML Browser Object

The HTML Browser object creates a pane for displaying static HTML. The HTML is not interactive. Selecting Properties from the component shortcut menu displays the HTML Object Properties dialog box, used to specify a URL.



Combo Box Subscription

The Combo Box Subscription object creates a drop-down list coordinated with other objects using a data source. See [“Creating Subscription Controls” on page 226](#).

Radio Button Group Subscription

The Radio Button Group Subscription object creates a radio button group (option button group) that is coordinated with other objects using a common data source. See [“Creating Subscription Controls” on page 226](#).

Check Box Group Subscription

The Check Box object creates check boxes coordinated with other objects using a common data source. See [“Creating Subscription Controls” on page 226](#).

Tab Group Subscription

The Tab Group Subscription object creates a tab series coordinated with other objects using a common data source.

The shortcut menu for Tab Group Subscription objects contains a special Custom Settings command. Tab Groups are typically positioned on one side of a coordinated rectangular data object, visually suggesting that the tab emerges from that side of the rectangle. The Orientation options indicate the side of the data object on which the tabs are positioned:

- Top
- Bottom
- Left
- Right

Note: The tab group area must be resized to display correctly.

See [“Creating Subscription Controls” on page 226](#).

Slider Subscription

The Slider Subscription creates a bar control coordinated with other objects using a common data source. The shortcut menu for Slider Subscription objects contains a special Custom Settings command:

| Custom Setting | Description |
|----------------|--|
| Orientation | The alignment of the slider subscription in relation to the document |
| Horizontal | Parallel with the ground alignment |
| Vertical | Straight up alignment |
| Show Ticks | Shows or hides the member points on the slider bar track |
| Show Track | Shows or hides the slider bar track |
| Show Labels | Show or hides the member labels on the slider bar track |
| Snap to Ticks | Requires the slider to snap to tick points on the slider bar track |

See [“Creating Subscription Controls” on page 226](#).

Selection Button Subscription

The Selection Button object creates a control button (command button) coordinated with objects using a common data source.

The Select Member dialog box Extended Mode option enables you to make live member selections when reviewing the custom document. Clicking the selection button in Analyze presents another Select Member dialog box, containing check boxes for defined member selections. You can select and display these members ad hoc. See [“Creating Dependent Subscription Controls” on page 229](#).

Multi-level Combo Box Subscription

The Multi-Level Combo Box Subscription object creates multiple coordinated drop-down lists representing the dimensional hierarchy. They are also coordinated with other objects using a common data source.

The combo boxes cascade. Selections made in a previous combo box populate subsequent dialog boxes with hierarchical descendents. Use the Custom Setting shortcut menu command to indicate the number of levels to cascade from the initial dimension member selection.

Multi-Level Combo Box Subscription objects feature a special Custom Settings shortcut menu command:

| Custom Settings | Description |
|-----------------|--|
| Orientation | Arranges the cascading multiple combo boxes horizontally or vertically. Note: The component area must be resized to display correctly. Also consider that asymmetric hierarchies require a component area providing for the greatest number of combo boxes. |
| Horizontal | Parallel with the ground alignment |
| Vertical | Straight up alignment |
| Set Depth | Displays the Enter Maximum Depth dialog box, used to indicate the number of levels from the member the multi-level combo box should cascade (the number of subsequent combo boxes) |

Alias Controller Object

The Alias Controller object enables custom document you to specify the alias table to use when the label mode is set to Descriptions (for the coordinated data object). The Alias Controller and the data object (Chart, Spreadsheet, or Pinboard) must be configured to share a common data source.

Use the Select Data Source dialog box to select a data source for the Alias Controller object. You can access the Select Data Source dialog box by dragging an Alias Controller object into the Document panel, or by selecting Properties from the Alias Controller object shortcut menu.

Services Button Object

The Services Button object creates a button that calls Web Analysis Studio services. Services are application actions or behaviors. The Select Service dialog box sets Services Button object properties.

| Select Service Control | Services Button Action |
|-----------------------------|--|
| Logout | Initiates logging off or existing from Web Analysis Studio |
| Previous Tab | Navigates to the previous tab series option |
| Home | Displays the Web Analysis Studio Home page |
| File Open | Opens the Open dialog box |
| Print | Opens the Print dialog box |
| Open Document | Opens a specified document without use of the Open dialog box |
| Edit Data | Puts the current document in edit data mode |
| Dimension Browser | Displays the dimension browser for a selected dimension of a related data object |
| Close Document | Closes the specified document |
| Save | Saves the current document |
| Toggle Toolbar | Shows or hides the toolbar for the current document |
| Toggle Information Panel | Shows or hides the View Pane Information Panel for the data object |
| Toggle Menu | Shows or hides the current document's menu bar |
| Send to Clipboard | Exports the current page of the current data object of the current document to the operating system clipboard |
| Member Search | Displays the Search dialog box, used to locate members in large dimension hierarchies See "Searching for Members" on page 63 |
| Change Display Type | Changes the data object display type |
| Display Type drop-down list | Specifies the display type, which is applied by the Change Display Type service button |
| Next Tab | Navigates to the next tab series option |
| Desktop | Displays the Web Analysis Studio desktop |
| User Preferences | Opens the User Preferences dialog box |
| Reload Document | Reloads the current document |
| Essbase Calculation Script | Triggers the specified calculation script of an Essbase data source The calculation script consolidates the OLAP cube, reflecting changes implemented through edit data mode or an update |
| Open Presentation | Opens a specified presentation |

| Select Service Control | Services Button Action |
|-------------------------|---|
| Assign Edit Data | Initiates edit data mode for a specified data object |
| Launch Executable | Opens a specified application executable |
| Data Layout | Opens the Data Layout dialog box for the current data object |
| Save As | Opens the Save dialog box |
| Toggle Masthead | Shows or hides the masthead for the current document |
| Toggle Status Bar | Shows or hides the Status bar for the current document |
| Send to Excel | Exports the current page of the current data object of the current document to Microsoft Excel |
| Apply Subscriptions | Performs a data retrieval when subscription controls that have “Activate From Service Button” are enabled |
| Launch External Browser | <p>Launches a browser session for the specified URL</p> <p>This URL enables passing of an SSO token, similar to related content URLs, using the token syntax \$SSO_TOKEN\$</p> <p>Valid in both EPM Workspace and Web Analysis Studio</p> |

| Services Button Properties | Description |
|----------------------------|--|
| Enter Text Label | Applies a static text caption to the Services button |
| Font | Opens the Font Properties dialog box for formatting the caption font |
| Color | Opens the Select Color dialog box for selecting button and border color |
| Select Graphic | Opens the Select Graphic dialog box for setting the Services button background image |
| Clear Graphic | Deletes the Services button background image |

Hotspots

A hotspot is an area that is linked to a Web Analysis Studio service. It is an invisible button that performs a predefined action. You can create a hotspot by making services buttons transparent. The invisible service button can be located over a graphic image, giving the appearance that an area of the image triggers the service.

Designers control the level of transparency. The hotspot can be completely invisible, display a border, or display a border and a text label. Completely opaque Service buttons are considered buttons, not hotspots. see [“Creating Hotspots” on page 223](#).

Services Button Custom Settings

Services buttons feature a Custom Settings shortcut menu command:

| Services Button Custom Setting | Description |
|----------------------------------|---|
| Location | |
| Leading | Positions icon before the text label |
| Trailing | Positions icon after the text label |
| Horizontal Text Alignment | |
| Left | Positions the text label to the left side of the Services button |
| Center | Horizontally centers the text label on the Services button |
| Right | Positions the text label to the right side of the Services button |
| Vertical Text Alignment | |
| Top | Positions the text label to the top of the Services button |
| Center | Vertically centers the text label on the Services button |
| Bottom | Positions the text label to the bottom of the Services button |

SQL Spreadsheet Objects

SQL Spreadsheet objects represent relational data sources as a spreadsheet, using standard SQL syntax queries. A SQL Subscription object enables you to create coordinated controls for the SQL spreadsheet. See [“SQL Spreadsheets” on page 193](#).

SQL Subscription Objects

The SQL Subscription control enables you to select relational column definitions from a drop-down list. The control is coordinated with a SQL Spreadsheet object using a matching relational data source (SQL query). The shortcut menu for SQL Subscription objects contains a Custom Settings command that indicates the type of subscription control used to present dimension member selections:

- Combo box
- Radio button group
- Slider
- Tab group

See [“Creating a SQL Subscription Control” on page 201](#).

Minimizing Document Load Times

Here are some general design recommendations for improving Web Analysis document load times. Please note that these recommendations do not represent limitations of the product, but

general guidelines to allow a document to load faster. All references to a “query” are referring to one Report Data Source in a document.

- No more than four (4) queries per document.
- No more than 100,000 of cells returned on a query.
- No more than four (4) OLAP selection/subscription controls that have “dynamic” enabled per Web Analysis document and should only contain a maximum of 5000 members for each.
- No more than 1000 pages on a query.
 - No more than twenty (20) Traffic Lighting definitions with a maximum of seven (7) levels per query.
 - No more than twenty (20) Show/Hide definitions per query.
 - No more than twenty (20) Calculations per query.
 - No more than twenty (20) Data Formatting definitions per query.
 - Only one (1) Retrieve Top/Bottom per query.
 - No more than twenty (20) Restrict Data conditions per query.
- No more than 1/2 MB of total size of graphics on a Web Analysis document. This includes graphics used on pinboards.
- When LROs or Integration Services Drill Through report are not necessary, disable the Show Linked Reporting Object Indicators to improve performance.
- When using advanced member selections to apply database formatting on a database connection, limit the use on small outlines no more than 10,000 members.

17

Editing Data Values

In This Chapter

| | |
|---|-----|
| Initiating Data Mode and Editing Data..... | 243 |
| Copying, Cutting, and Pasting To and From Microsoft Excel | 244 |
| Tips for Edit Data Mode | 244 |
| Integration Services Drill-Through | 244 |
| Accessing Related Content..... | 245 |
| Related Content Definitions..... | 245 |





Initiating Data Mode and Editing Data

Users with permissions can edit cell values and write edits back to Essbase. You can initiate Edit Data mode only from the spreadsheet display type.

- To initiate Edit Data mode and Edit Data.

1 Right-click a cell and select **Edit Data**

The Edit Data Bar is displayed at the bottom of the content area and features these controls:

| Button | Control | Description |
|---|--|--|
|  | Close and Disable Edit Data mode | Closes Edit Data mode. |
|  | Send/Commit changes to database server | Applies edits to the database. |
|  | Calculate database | Prompts the database server to recalculate the database. |
|  | Refresh Data | Reload the last saved data values. |

2 Double-click a cell to edit its data value.

3 Double-click a cell to edit its data value.

The cell border becomes gray, and cell formatting is disabled.

4 Enter a data value and click outside the cell.

5 Click **Send/Commit changes to the database server**.

Only authorized users can successfully write changes to the database. The Confirmation dialog box is displayed if write-back is successful.

6 Optional: To recalculate the database, click **Calculate database**.

7 To exit Edit Data mode, click **Close and Disable Edit Data mode**.

Copying, Cutting, and Pasting To and From Microsoft Excel

When in Edit Data, you can cut, copy and paste a range of cells from a Microsoft Excel spreadsheet into the Web Analysis Studio spreadsheet. These edits can be posted to Essbase. You can also cut, copy, and paste between values in Web Analysis Studio.

You can use these keyboard shortcuts:

- **Copy**—Select a range of cells and press Ctrl+C
- **Cut**—Select a range of cells and press Ctrl+X
- **Paste**—Select a range of cells and press Ctrl+V

Tips for Edit Data Mode

- You cannot edit calculated members, because these values do not reside in the database.
- You cannot edit attribute dimensions, because these values do not reside in the database.
- Dimensions composed of implied shares (or user-defined hierarchies) aggregate differently than conventional dimension hierarchies. Therefore, the implied share may overwrite data edits made to the Parent of an implied share as the model is pivoted.

Example: Actual and Budget are implied shares of the Parent, Scenario. Scenario, however, is a categorical label, not an aggregation of Actual and Budget measures.

Integration Services Drill-Through

Integration Services drill-through is a server-based form of relational drill-through. As with conventional relational drill-through, you can construct liaisons between OLAP data and relational data sources. With Integration Services drill-through, you can also drill to the relational document from an intersection in the Web Analysis Studio document.

Your Essbase Administrator must establish Integration Services drill-through documents. The relational query is stored as intersection-specific metadata and flagged as a linked documenting object. When you double-click flagged cells, the OLAP document navigates to the specified relational document.

Web Analysis Studio enables read access to Integration Services through the Related Content dialog box.

Linked documenting object indicators, blue triangles, indicate related content such as drill-through documents. Each Integration Services drill-through document is unique to the drilled intersection.

- To access an Integration Services document, double-click cells displaying linked documenting object indicators, and select the drill-through document from the **Related Content** dialog box.

Accessing Related Content

You can use EPM Workspace to create and retrieve related content definitions. Related content can include, but is not limited to:

- LROs - cell notes, URLs, and file attachments stored at Essbase intersections
- Integration Services drill-through content
- Financial Management cell text and line item details stored at Financial Management intersections
- Financial Reporting content displayed as HTML or PDF

EPM Workspace passes the context of the current document to other Web Analysis documents. This enables the related content target to reflect the current POV.

When passing context to Oracle | Hyperion Documents, only dimensions in the current Oracle | Hyperion Documents POV are imported.

After they are defined, Related Content definitions can be managed from the Related Content dialog box.

- To access related content definitions:

1 Perform one:

- Click a cell displaying an LRO indicator.
- Right-click a cell displaying an LRO indicator and select **Related Content** from the shortcut menu.

The Related Content dialog box is displayed.

2 To display the corresponding content, click a related content definition, or click **Launch**.

If necessary, select one client option from the shortcut menu, or the Launch drop-down list.

Related Content Definitions

You can apply related content definitions to specified cell intersections.

When the Related Content dialog box is displayed, it lists all related content definitions for that intersection. Related content definitions defined for cell intersections are differentiated by *italicized text*.

Related Content Dialog Box

The Related Content dialog box lists previously configured related content links. EPM Workspace allows for creating cell notes in the Related Content dialog box. Related Content Cell Notes are defined using the Cell Note dialog box.

| Control | Used To: |
|------------|---|
| Delete All | Delete all related content definitions for the current selection. |

In This Chapter

| | |
|---|-----|
| Importing Documents and Presentations | 247 |
| Integration Services Drill-Through | 249 |
| Accessing Related Content..... | 249 |
| Related Content Definitions..... | 250 |
| Creating Related Content Definitions | 251 |
| LROs..... | 253 |

This chapter provides information on accessing external media.

Importing Documents and Presentations

You can import previously exported documents and presentations from local computers and mapped drives. All content exported from Web Analysis (both presentations and reports) is appended with extension *.apt.

➤ To import a document or presentation:

1 Select File, then Import, then From Local File.

The Import wizard is displayed. The Import wizard has two steps: Choose Files and Map Resources.

2 Perform one:

- Enter the fully qualified path from your client to a file you would like to import in **Select a file to Import**.
- Click the ellipses (...) button to Browse to the file using the Open dialog box.

3 Perform one:

- Enter the path from the root directory to the repository location to save the imported file.
- Click the ellipses (...) button to Browse to the repository location using the Open dialog box.

4 Optional: Select one:

- Click **Create entire** to recreate the database connections and documents used by the file, from xml definitions in the file.
- Click **Map to existing files** to use database connections and documents currently in the repository, instead of generating duplicates.

If no selection is made, Map to existing is used by default.

In Step 2, you must map database connections, and for presentations, you must map document playlists back to repository documents.

5 **Optional: To locate a database connection for an unmapped document, perform these tasks:**

- a. Click a document row with a <Missing> status.

Three command buttons are enabled at the bottom of the dialog box.

- b. Click **Locate**.

The Open dialog box is displayed, with the Files of type set to database connections.

- c. Navigate to a database connection, select it, and click **OK**.

The Open dialog box is dismissed. The Step 2 frame displays the document database connection status as OK.

6 **Optional: To create a database connection for an unmapped document:**

- a. Click a document row with a <Missing> status.

Three command buttons are enabled at the bottom of the dialog box.

- b. Click **Create New**.

The Database Editor dialog box is displayed with the Server tab current.

- c. Enter a server name in **Database Server**.

Web Analysis Studio enters the cached user ID and password information in the Login Information group.

- d. **Optional:** Replace **User ID** and **Password** credentials.

- e. Click **Connect**.

The Database tab is enabled.

- f. Click the **Database** tab to make it current.

The Database tab features Application and Database areas and a Available Database selection frame listing the databases on the connected data source.

- g. In **Available Database**, select a database application.

The selection populates the corresponding area.

- h. **Optional:** To define measures formatting criterion, click **Formatting**. See [“Creating OLAP and Oracle | Hyperion Database Connections”](#) on page 158.

- i. **Optional:** To define a relational drill-through connection to a relational data source, click the **Relational Drill-through** tab. See [“Creating Relational Drill-Through”](#) on page 163.

- j. Click **OK**.

The Database Editor dialog box is dismissed. The Step 2 frame displays the document database connection status as OK.

7 Optional: To restore the original database connection exported with the document:

- a. Click a document row with a <Missing> status.

Three command buttons are enabled at the bottom of the dialog box.

- b. Click **Restore**.
- c. The Save As dialog box prompts you for a location to which database connections and document definitions are saved. Navigate to a repository location, enter a file name, and click **OK**.

The Step 2 frame displays the document database connection status as <Creating>. The connection is not created until you map all document rows.

8 Repeat steps 5, 6, and 7 until all documents are mapped to a database connection.

9 Click Finish.

10 When database connections are mapped for all imported documents in the selected repository folder, click Close.

Integration Services Drill-Through

Integration Services drill-through is a server-based form of relational drill-through. As with conventional relational drill-through, you can construct liaisons between OLAP data and relational data sources. With Integration Services drill-through, you can also drill to the relational document from an intersection in the Web Analysis Studio document.

Your Essbase Administrator must establish Integration Services drill-through documents. The relational query is stored as intersection-specific metadata and flagged as a linked documenting object. When you double-click flagged cells, the OLAP document navigates to the specified relational document.

Web Analysis Studio enables read access to Integration Services through the Related Content dialog box.

Linked documenting object indicators, blue triangles, indicate related content such as drill-through documents. Each Integration Services drill-through document is unique to the drilled intersection.

- To access an Integration Services document, double-click cells displaying linked documenting object indicators, and select the drill-through document from the **Related Content** dialog box.

Accessing Related Content

You can use EPM Workspace to create and retrieve related content definitions. Related content can include, but is not limited to:

- LROs - cell notes, URLs, and file attachments stored at Essbase intersections
- Oracle Essbase Integration Services drill-through content
- Financial Management cell text and line item details stored at Financial Management intersections
- Oracle Hyperion Financial Reporting, Fusion Edition content displayed as HTML or PDF

EPM Workspace passes the context of the current document to other Web Analysis documents. This enables the related content target to reflect the current POV.

When passing context to Oracle | Hyperion Documents, only dimensions in the current Oracle | Hyperion Documents POV are imported.

After they are defined, Related Content definitions can be managed from the Related Content dialog box.

Note: Using the following special characters in a Web Analysis report name will result in “Invalid argument” when attempting to launch the link in Workspace: left bracket “(“, twiddle “~” and dash “-”.

► To access related content definitions:

1 Perform one:

- Click a cell displaying an LRO indicator.
- Right-click a cell displaying an LRO indicator and select **Related Content** from the shortcut menu.

The Related Content dialog box is displayed.

2 To display the corresponding content, click a related content definition, or click **Launch.**

If necessary, select one client option from the shortcut menu, or the Launch drop-down list.

Related Content Definitions

You can apply related content definitions to specified cell intersections.

When the Related Content dialog box is displayed, it lists all related content definitions for that intersection. Related content definitions defined for cell intersections are differentiated by *italicized text*.

Related Content Dialog Box

The Related Content dialog box lists previously configured related content links. EPM Workspace allows for creating cell notes in the Related Content dialog box. Related Content Cell Notes are defined using the Cell Note dialog box.

| Control | Used To: |
|------------|---|
| Delete All | Delete all related content definitions for the current selection. |

Creating Related Content Definitions

Creating related content definitions is a two-part process, as described in these topics:

1. “[Specifying Related Content Dimension Members](#)” on page 251
2. “[Defining Related Content](#)” on page 252

Specifying Related Content Dimension Members

- To apply a related content definition to a cell, right-click the cell and select **Related Content**.
- To apply a related content definition to all cells in a row or column by dimension member, right-click the dimension member row or column header.

- To apply a related content definition to a selection statement:

- 1 **Right-click the dimension member row or column header.**
- 2 **Select **Related Content**.**

The Related Content dialog box is displayed.

- 3 **To edit the dimension member selection displayed in **Apply to**, click **Edit**.**

The Edit Selections dialog box is displayed.

- 4 **To display **Dimensions**, click **Advanced**.**

- 5 **Click a check box to select dimension members.**

If you select one dimension from the Dimensions panel, the corresponding dimension members are displayed in the Combinations panel.

If you select multiple dimensions from the Dimensions panel, Combinations displays dimension member aggregations.

- 6 **To specify the dimension member, click check boxes in **Combinations**.**

Selections display in **Selections**. Click Remove to delete the current selection, or Remove All to delete all member selections and start over.

- 7 **When dimension member selections are defined, click **OK**.**

The Edit Selections dialog box is dismissed, and the Related Content dialog box is displayed. The **Apply To** panel displays the dimension member selection. You can now create a related content definition, using the next procedure.

Defining Related Content

► To create a related content definition:

1 Right-click the cell or dimension member header in which the related content is to be embedded.

2 Select **Related Content.**

The Related Content dialog box is displayed.

3 Click the **Add Related Content icon.**

The Add Related Content dialog box is displayed. In the Available panel, applications are listed as nodes. Each node can be expanded to list available application content.

4 To locate application content, perform one:

- Double-click a node name to expand the node.
- Click a node plus sign (+) to expand the node.

Notice that applications such as Web Analysis Studio enable you to specify the client with which the content displays.

5 Click to select the application content.

6 To move the selection to Selected Related Content, click **Add.**

If the “Show Properties When Adding Content” option, at the bottom of the Add Related Content dialog box, is selected the Related Content Properties dialog box is displayed.

7 Optional: To set Related Content Properties for Selected Related Content, perform one:

- Select a related content definition and click **Properties**.
- Right-click a related content definition and select **Properties**.

The Related Content Properties dialog box is displayed.

You can optionally set properties:

- To change the related content definition name, enter a name in **Label**.
- To indicate how related content is displayed, select options in **Client Options**. The document's related content can be displayed in HTML or PDF.
- To edit the URL of the related content definition, edit the URL of the corresponding tab.

8 Click **OK to close the Related Content Properties dialog box.**

9 Click **OK to close the Add Related Content dialog box.**

The related content definition is displayed in the Related Content dialog box.

10 Click **Close.**

The document displays the LRO indicator(s).

LROs

LROs embed cell notes, URLs, and file attachments in document cells. LROs are connections to external media stored in Essbase.

LROs are available to Essbase users who enabled the Essbase Grid API feature.

An LRO indicator triangle indicates the presence of a drillable LRO. LROs are embedded in, and move with, multidimensional intersections.

You can display or hide Linked Documenting Object indicators using the Data Display shortcut menu.

Linked Reporting Objects can only be applied to cell intersections, unlike other related content definitions (which can be applied to cells, rows, columns, or selection statements).

Creating LROs

Note: You must first configure and enable the Essbase Grid API, before you can create LROs. The Workspace can only create cell note LROs.

➤ To create a cell note:

- 1 **Right-click the cell in which the LRO is to be embedded.**
- 2 **Select Related Content**
The Related Content dialog box is displayed.
- 3 **Click one the Add Note icon.**
- 4 **Enter cell note information.**
- 5 **Click OK.**
- 6 **Click OK.**

The document displays the LRO indicator.

Accessing LROs

➤ To access an LRO:

- 1 **Perform one:**
 - Click a cell displaying an LRO indicator.
 - Right-click a cell displaying an LRO indicator and select **Related Content** from the shortcut menu.

The Related Content dialog box is displayed.

- 2 **To display the corresponding content, double-click a related content definition, or click **Launch**.**

In This Chapter

| | |
|--------------------------------------|-----|
| Working with Preference Files | 255 |
| Finding Preferences | 257 |
| General Preferences | 258 |
| Folders Preferences | 259 |
| Look and Feel Preferences | 260 |
| Drilling Preferences | 261 |
| Default Formatting Preferences | 261 |
| OLAP Server Preferences | 262 |
| Database Preferences | 263 |
| POV Definitions | 265 |
| Personal Variables | 266 |

Working with Preference Files

You can customize the Web Analysis display and set behavior for documents by setting preferences.

- To display the User Preferences dialog box, select **File**, then **Preferences**.

Preferences are stored in the repository as a preference file. Although multiple preference files can be defined, only one can be current, or active. Multiple users can share a common active preference file, also called shared preferences.

User preference files for a user are located in a user's `Profiles` folder and are named "Analyzer Preferences"; for example, `Users/username/Profiles/Analyzer Preferences`. When user preferences are modified, all changes are saved to this file.

An administrator can create a shared preference file that other users can select as their active preferences.

Note: Shared preference files can be created and edited only in Web Analysis Studio.

At the top of the User Preferences dialog box, the Active Preferences controls specify the current preference file. Changing active preferences does not impact currently opened documents in the content area. Preferences are only applied to subsequently opened and created documents.

Note: Some preferences may take effect only when documents are reloaded.

Topics that discuss preference files:

- [“Setting Active Preferences” on page 256](#)
- [“Creating Preference Files” on page 257](#)
- [“Editing Shared Preference Files” on page 257](#)
- [“Managing Shared Preference Files” on page 257](#)

Setting Active Preferences

► To set active preferences, perform one:

- To use the preference file in your `Users/username/Profiles` directory, click **Use My Preferences**.
- To use another preference file, click **Use Shared Preferences**, and click **Browse** to navigate to the preference file.

Preferences and Formatting Options

There are some identical formatting options and preferences. Preferences are global settings applied to documents. Preferences, however, can be overridden by database connection formatting and document-based formatting.

Order of Formatting Precedence

1. Formatting options saved with documents
2. Formatting options saved with the database connection
3. Formatting options specified in the User Preferences dialog box

See [“Formatting Order of Precedence” on page 92](#).

Spreadsheet preferences and chart preferences are identical to spreadsheet options and chart properties. They are only applied to subsequently created documents, however. See [“Spreadsheet Options” on page 101](#) and [“Charts and Chart Types” on page 102](#).

Creating Preference Files

Administrators can create preference files that users can select as shared preferences in Web Analysis Studio and EPM Workspace. The default folder for shared preferences is `Users/{Profiles}`.

➤ To create a preference file that can be shared by users:

- 1 **Select File, then New, then Preferences.**

The Save As dialog box is displayed.

- 2 **Navigate to a repository folder and enter a file name.**
- 3 **Click OK to display User Preferences.**
- 4 **Edit user preferences, and click OK to save changes.**

Editing Shared Preference Files

➤ To change preferences settings in a shared preference file:

- 1 **In Web Analysis Studio, navigate the repository to locate a shared preference file and select it.**
- 2 **Right-click the preference file and select Edit to open User Preferences.**
- 3 **Change user preferences, and click OK to save the changes and close User Preferences.**

Managing Shared Preference Files

Preference files can be shared among users to utilize as their active preferences.

➤ To enable user access to shared preference files:

- 1 **In Oracle Enterprise Performance Management Workspace, Fusion Edition, navigate to a preference file, right-click it, and select Properties.**
- 2 **In Properties, under General Properties, click Edit Permissions.**
- 3 **Assign users, groups, or roles to the file (in the same manner as you would permissions to repository objects).**

Finding Preferences

Preferences are organized onto nine (9) tabs. Click a tab to make it current.

| Panel | Preferences |
|---------|--|
| General | Home Page and Startup |
| Folders | Reports folder, Databases Folder, Desktop Folder, and Favorites Folder |

| Panel | Preferences |
|--------------------|--|
| Look and Feel | Use of Data Layout in documents, Desktop Wallpaper, and Interface Elements |
| Drilling | Drilling Methods, Linking, Append or Replace Member Selections (Expand on Drill) |
| Spreadsheet | Spreadsheet Options |
| Chart | Chart Properties |
| Default Formatting | Leading and Trailing Formatting, Replace Missing With, and Numeric Formatting |
| OLAP Server | Suppression, Show Linked Document Object Indicators, Financial Management Entity Currency (Financial Intelligence) |
| Databases | Database Alias Table, Default Log on, POV Definitions, Personal Variable Definitions |

General Preferences

General preferences are divided into three groups:

- [Home Page Preferences](#)
- [Startup Preferences](#)

Home Page Preferences

The toolbar and the Go menu offer single-click access to a Web Analysis Studio Home page. The home page should be a frequently used repository location.

You can specify the desktop or a document as the Web Analysis Studio Home page. The specified document is displayed when you click the Home toolbar button.

► To set the Web Analysis Studio Home page using preferences:

1 Select File, then Preferences.

The User Preferences dialog box is displayed. Note that you are setting the Home page for active preferences. If it is a shared preference, you are setting the Home page for all users sharing this preference file.


2 Click to make General the current tab.

3 In Home Page, perform one:

- Click **Use Desktop** to set the Desktop Folder, as specified by Folder preferences, as the Home Page.
- Click **Use Current Document** to set the current document as the Home Page.
- Click the ellipses (...) button to select a repository location from the Open dialog box as the Home Page.
- Enter a repository location in the text area to be used as the Home Page.

4 Click OK.

➤ To go to the Web Analysis Studio **Home Page** in Analyze:

- Click .
- Select **Go**, then **Home**.
- Press **Alt+Home**.

Startup Preferences

Startup preferences enable you to specify the document or document group to be displayed at startup:

- The Analyze mode interface (None)
- The Open dialog box
- The Web Analysis Studio Home Page
- A presentation
- A document

➤ To set startup preferences:

1 Select File, then Preferences.

The User Preferences dialog box is displayed. Note that you are setting the startup option for active preferences. If it is a shared preference, you are setting the startup option for all users sharing this preference file.

2 Click to make General the current tab.

3 In Startup, select one:

- None
- Start in Open Dialog
- Home Page
- Document

4 Optional: If you select Document, you must also specify which document to use:

- Click the ellipses (...) button to select a repository location from the Open dialog box as the Startup document.
- Enter a repository location in the text area to be used as the Startup Document.

You can specify a document or a presentation as the startup document.

5 Click OK.

Folders Preferences

Folders preferences display the repository locations currently set as these folders for the active user or group:

- Reports folder
- Databases folder
- Desktop folder
- Favorites folder

You can only reset the folder locations for the active user.

Note: As with all file systems, though the default directories, folders, and files were designed for a purpose there is nothing to prevent you from diverging from this original design. See [“User and Group Folders” on page 41.](#)

► To reset Folder preferences:

1 Select File, then Preferences.

The User Preferences dialog box is displayed. Note that you are setting folders for active preferences. If it is a shared preference, you are setting folders for all users sharing this preference file.

2 Click to make Folders the current tab.

3 Perform one:

- In a text area, enter a repository location to be used for the corresponding folder.
- Alternatively, click the ellipses (...) button and select a repository location from the Open dialog box, to be used for the corresponding folder.

4 Click OK.

Look and Feel Preferences

Look and Feel preferences are organized into three groups:

| Look and Feel Preferences | Description |
|---------------------------|--|
| New Documents | <p>Specifies Web Analysis Studio behavior for opening a database connection.</p> <p>When disabled (default), opening a database connection through the Open Menu, Open toolbar button or View Pane shortcut menu, results in a Auto-Populate Dimension document. Auto-Populate Dimension documents assume use of the highest aggregate members of the time and measures dimensions to populate the rows and columns axes of a spreadsheet.</p> <p>When enabled, the use of a spreadsheet is still assumed, but you must assign dimensions to axes with Data Layout as part of creating a document.</p> |
| Desktop | Sets the desktop wallpaper graphic, using the Select Graphic dialog box. |

| Look and Feel Preferences | Description |
|----------------------------------|--|
| Display | Sets interface elements to be displayed by default: <ul style="list-style-type: none"> ● Content tabs ● Main menu (menu bar) ● Toolbar ● Masthead ● Filter panel ● View pane ● Status bar ● Multi-page drop-down |

Drilling Preferences

Drilling preferences are organized into these three groups:

| Drilling Preferences | Description |
|-----------------------------|---|
| Method | Sets drilling navigation through the dimension hierarchy to one of these menu options: <ul style="list-style-type: none"> ● Next Level - Returns the next lowest level. ● Descendants - Returns all descendants. ● Dimension Bottom - Returns the lowest level (level 0). ● Siblings - Returns members on one level that share a parent. ● Same Level - Returns members on one level ● Same Generation - Returns members equidistant from the highest ancestor. |
| Linking | Sets drilling navigation to Pass Page dimension and/or Pass Filter dimension context during drill-through operations to other documents: <ul style="list-style-type: none"> ● Pass Pages - sets drill linking to pass the page dimension member context. ● Pass Filters - sets drill linking to pass the filter dimension member context. |
| Expand On Drill | Augments the drilled member with the drilling result set. See “Drilling” on page 84 . |

Default Formatting Preferences

Formatting options format headers and data based on dimension member selections.

While the formatting options are fixed, the scope of the formatting varies depending on the source of the formatting. See [Chapter 8, “Formatting Documents.”](#)

| Formatting Options | Description |
|---------------------------------|--------------------|
| Leading and Trailing Formatting | |

| Formatting Options | Description |
|-----------------------|---|
| Currency Symbol | Inserts currency formatting symbols into the Positive Prefix and Negative Prefix text boxes: Dollar (\$), Cents (¢), Pound (£), Euro (€), Deutschmark (DM), Franc (F), and Yen (¥). |
| Positive Prefix | Enters character to precede positive numeric values. |
| Positive Suffix | Enters character to follow positive numeric values. |
| Negative Prefix | Enters character to precede negative numeric values. Warning: The minus sign (-) is the default prefix. Deleting the default prefix without replacing it causes negative values to display positively. |
| Negative Suffix | Enters character to follow negative numeric values. |
| Numeric Formatting | |
| Grouped Thousands | Displays numeric digits as grouped by thousands. |
| Minimum Decimals | Indicates the minimum number of decimal places to display. |
| Maximum Decimals | Indicates the maximum number of decimal places to display. |
| Scale | Enables abbreviated values by tens, hundreds, thousands, ten-thousands, hundred-thousands, millions, and billions. |
| Use Negative Color | Indicates that negative numbers are signified by a selected color. |
| Select Negative Color | Enables you to select the color representing negative values. |
| Samples | |
| Update Samples | Updates the samples panel based on the most recent formatting selections. |
| Replace Missing With | Replaces missing values with a text string or zero. <ul style="list-style-type: none"> ● Zero ● Text |

OLAP Server Preferences

OLAP server preferences set features of the OLAP server from Web Analysis Studio.

| OLAP Server Preferences | Description |
|---|---|
| Suppress | Omits components, as selected, from the query result set: <ul style="list-style-type: none"> ● Missing Rows ● Shared Members ● Zero Rows |
| Show Linked Reporting Object Indicators | Enables and disables the display of LRO icons (triangles). |

| OLAP Server Preferences | Description |
|--------------------------------|--|
| Display Entity Currency | When using a Financial Management data source with defined Entity dimension currency information, you can enable the Display Entity Currency option, to append the Entity dimension members with your currency value. This can be set before querying using Data Layout options, after querying using the Data Display shortcut menu, and for all subsequently created documents using OLAP Server preferences. See “Financial Management” on page 168 . |
| Save Filters only for User POV | User POV enables users to select members in Filters, Pages, Rows, and Columns (Data Layout and/or member selection controls) and applies them to multiple Web Analysis documents. All Subscription controls have Save Selection as a User POV option. A selection is saved as a filter to the User POV. |

Essbase imposes a maximum limit of 256 columns. Web Analysis Studio sets a column limit of 50,000 data cells for a query. There is also a query governor that enables you to set limits on the number of cells returned by a query; the default is also 50,000 data cells.

Database Preferences

Databases preferences provide an inventory of database servers and database connections available to the current user by listing the database connection name, description, alias table, and repository location for available database connections.

To review the database preferences for a database connection, you must select the database connection name from the list and click **Edit**. The Database Preferences dialog box is displayed. It has three tabs:

- General
- Point of View
- Personal Variable

You must click **Connect** to connect to the data source and retrieve the values for these settings. If you are unable to connect, you may browse to another database connection file.

See also [“Creating and Applying Points of View” on page 74](#) and [“Creating and Selecting Personal Variables” on page 73](#).

Alias Tables

Alias tables are database tables that store aliases, or alternate description labels, for dimensions or members. Only Essbase enables you to define multiple alias tables. Web Analysis Studio enables you to specify which alias table to use. The alias table selection is saved as a Database user preference.

Label mode enables you to select whether a dimension member is listed by ID number, description, or both. Label mode options are data source-specific, and can be set for database connections, documents, and dimensions.

Although the label mode indicates whether the description or ID number is used, it is the database alias table that provides the displayed value.

You can set the alias table before opening a document using Database preferences.

You can set a default label mode before querying the data source using Data Layout options, and after querying using Data Display options on the Main Display panel shortcut menu.

You can specify which description label to use in dimensions, using Dimension Browser and using Data Display options on the data object shortcut menu.

Setting Alias Tables and Default Logon Method

► To specify a default alias table for a database connection:

1 Select File, then Preferences.

The User Preferences dialog box is displayed. Note that you are setting the default alias table for active preferences. If it is a shared preference, you are setting the default alias table for all users sharing this preference file.

2 Click to make Databases the current tab.

3 Optional: To edit database preferences for a database connection, select the database connection from the list and click Edit.

4 Optional: To add a database connection to the list, click Add.

The Database Preferences dialog box is displayed. It has three tabs: General, Point of View, and Personal Variables. Note that the Point of View and Personal Variable tabs are disabled until a database connection is identified.

5 Optional: To identify a database connection file, perform one:

- Click the **Browse** button and navigate to a database connection file in the repository. Select the file and click the Open dialog box **OK**.
- Enter the repository location and file name for a database connection file in the text area.

If you cannot access database connections, See [Chapter 12, “Managing Database Connections,”](#) or consult your Web Analysis Studio administrator.

6 Click Connect, to retrieve the latest values.

You may be prompted by the Database Login dialog box, to log on to the data source. Enter logon credentials, and click **OK**.

When you connect to the data source, the Database File Location text area is disabled, and **Connect** is converted to **Disconnect**. If you are using a data source that supports POV, Personal Variables and Alias Tables, these controls are enabled.

7 Select an alias table from Alias Table.

8 Select one of these options from the Default Logon group:

| Default Logon Options | Description |
|---------------------------------|--|
| Use User's ID and Password | Connects to the database connection using the Web Analysis Studio user ID and password. |
| Prompt for User ID and Password | Connects to the database connection by prompting the user for a Web Analysis Studio user ID and password. |
| Enter User ID and Password | Connects to the database connection using a user ID and password for the database connection, if it varies from the Web Analysis Studio Login parameters. You must enter values in the corresponding text areas. |

9 Click OK.

Whenever the specified database connection is used, the selected label mode is also used. Subsequent label mode selections made in the Data Layout or the Dimension Browser overwrite these default settings.

POV Definitions

POV database preferences insert dimensions and members that are of interest to you into the documents of others. POV definitions are defined and activated by database connection.

When a POV is activated, the Use Point of View option in Data Layout and the Document Creation wizard are enabled. All subsequently created and loaded documents use the specified POV until it is deactivated. You can also deactivate use of POV by deselecting the Data Layout Use Point of View option as needed.

POV definitions consist of axes and dimension member selections. The definition is used when documents are created with the activated POV.

When you apply a POV definition to a document, only the dimension member selections are applied. This prevents points of view from automatically arranging non-functioning layouts (such as moving all dimensions to one axis).

If all POV member selections are custom filters, you may not see obvious changes to your document. You can check to see which POV is applied on the View Pane Information Panel tab, Point of View segment.

Using a POV definition is a three part process. First, you must create a POV definition. Next, you must activate the POV definition. Lastly, you must set a document to use the activated POV definition, or create a document that uses it.

Consider these four (4) benefits:

Generic and Specific Documents

Document designers in large enterprises can create a set of generic documents, knowing that individual users can superimpose diverse and user-specific member selections into these documents.

Replacing Member Selection Statements

You can apply the complex calculations and analysis tool definitions of others' documents to the dimensions and members they track, using points of view. This eliminates the need for the user to investigate and recreate these analyses.

Default Dimension Layout and Member Selections for New Documents

When points of view are activated, the document-creation process is simplified. Data Layout is loaded with the dimension member selections designated by the current POV.

Session-based Points of View

Session-based. POV definitions are saved and recalled as part of individual database connections. This enables them to be used on all documents using the corresponding database connection.

Reloading Documents

You must reload the document for the applied POV definition to be displayed.

POV Definitions and Personal Variables

POV definitions replace all member selections for corresponding dimensions and database connections. Personal variables can instead augment member selections for one dimension.

You can also leverage personal variables in the creation of POV definitions.

See [“Creating and Applying Points of View” on page 74](#).

Personal Variables

Personal variables enable you to define and name complex member selections. After being defined, you can select personal variables when they are presented (with the corresponding dimension and database connection).

Generic and Specific Documents

Other users can create personal variables using matching name, dimension, and database connection that contain the dimensions members that are of interest to them.

This technique enables everyone to create hybrid documents that feature generic and user-specific content.

POV Definitions and Personal Variables

POV definitions replace all member selections for corresponding dimensions and database connections. Personal variables can instead augment member selections for one dimension.

You can also leverage personal variables in the creation of POV definitions. See [“Creating and Selecting Personal Variables”](#) on page 73.

In This Chapter

| | |
|--|-----|
| Defining the Behavior of Drill Link Reports When the Target Report is Closed | 269 |
| Web Analysis Utilities | 269 |
| Improving Web Analysis Studio Responsiveness | 272 |
| Improving Web Analysis Studio Performance | 272 |
| Importing ARU Files to Set User and Active Preferences | 272 |
| Rename Utility | 279 |

Defining the Behavior of Drill Link Reports When the Target Report is Closed

When drilling from one report to another using the Drill Link capability, you can define the behavior of what occurs when the target report (the report that was opened when drill linking for the source report) is closed. By default, when any report is closed, the active report becomes the report that was most recently opened.

To set a Drill Link “target” report to return to the “source” report when it is closed, set the following in the `WebAnalysis.properties` file to “true”. The default behavior is “false”. This feature applies only to drill link reports; not reports opened through Service Buttons or AIS Drill Through reports.

```
ReturnToDrillSource=true
```

Web Analysis Utilities

Topics that explain Web Analysis utilities:

- “Repository Password Encryption Utility” on page 269
- “Web Analysis Configuration Test Servlet” on page 270

Repository Password Encryption Utility

When moving, migrating, and upgrading repositories, users may change the repository user ID and password values listed in `WebAnalysis.properties`. Because these file values are viewable over the Web using the Configuration Test Servlet, a method exists to encrypt password values.

► To change and encrypt repository passwords:

- 1 Stop the application server.
- 2 From release 11.x, the `WebAnalysis.properties` file settings are managed via the EPM System Configuration Module.

The default location is `\\WebAnalysis\conf\WebAnalysis.properties`.

- 3 In the `Repos Config` section, locate these variables:

- `db.user=<userID>`
- `db.password=<encrypted password>`
- `db.password-encrypted=true`

- 4 Edit values for user ID and password.

Note that the password is not encrypted.

- 5 Change the `db.password-encrypted` value to `false`.

- 6 Save your changes.

- 7 Navigate to `\\WebAnalysis\conf\` and run `EncryptUtil.bat` or `EncryptUtil.sh`.

You may use alternative methods to execute this file. `EncryptUtil` locates the user ID, password, and encryption variable, encrypts the password, and resets `db.password-encrypted` to `true`.

To review the changes, open `WebAnalysis.properties`.

- 8 Restart the application server.

Web Analysis Configuration Test Servlet

Use Web Analysis Configuration Test Servlet to diagnose and resolve connectivity issues. The servlet displays links that centrally report environmental variables and `WebAnalysis.properties` parameters, and test connectivity to the class factory, the repository, the external authentication configuration file, and the Essbase driver.

► How to enable Config Servlet before launching:

- 1 On the Web Analysis server, launch EPM System Configurator (CMC) server from `<HYPERION_HOME>/common/workspacert/9.5.0.0/bin/startUI.bat` (or `€` in Linux/Unix).
- 2 When the CMD process window opens, minimize the window and proceed to Step 3.
- 3 Open browser to logon to CMC with this URL: `http://server:55000/cmc`.
- 4 Select **Current View: Web-Application Configuration** drop-down.
- 5 Right -click **WebAnalysis Web-Application** and select **Properties**.
- 6 Select the **Debug Config** tab.
- 7 On the **disableConfigServlet** line click **Yes**. Select **No** from the drop-down to enable the option.

8 Recycle Web Analysis server(s).

9 Open Config Servlet URL at `http://server:16000/WebAnalysis/config`.

► To launch Configuration Test Servlet, open a Web browser and type this URL:

`http://<hostname>/WebAnalysis/Config`

Configuration Test Servlet provides links to configuration information:

- [“List Environment Variables” on page 271](#)
- [“Services Framework Test” on page 271](#)
- [“Test Pages for Essbase, Financial Management, and SAP BW ODBO” on page 271](#)

Tip: Use the browser’s **Back** button or the **Available Tests** link at the page bottom to return to the Configuration Test Servlet home page.

List Environment Variables

The List Environment Variables page provides information about Java system properties and system environment variables, such as `user.name`, `Java.class.path`, `Java.home`, `HYPERION_HOME`, `LOGONSERVER`, and `CLASSPATH`.

Services Framework Test

The Test ATF Configuration page retrieves information from the repository and tests the repository connection. The last line on the page indicates whether the test executed successfully. If the test failed, a stack trace is displayed to help you troubleshoot problems.

Test Pages for Essbase, Financial Management, and SAP BW ODBO

The test pages for Essbase, Financial Management, and SAP BW ODBO, provide this configuration information:

- ADM Environment Variables
- ADM Property File Locations (click a link to view the property file)
- ADM Jar Locations
- Version Information

You use these pages to test your connectivity (using ADM) to Essbase, Oracle Hyperion Financial Management, Fusion Edition, and SAP BW ODBO.

Improving Web Analysis Studio Responsiveness

- To improve the performance and applet load time of Web Analysis Studio through Windows Control Panel, increase the maximum amount of memory allocated to the plug-in.

- 1 Select **Start**, then **Control Panel**, then **Java Plug-In** to open the Java plug-in console.

Note: If multiple Java Plug-in versions are installed, select the version that Web Analysis Studio uses.

- 2 Select the **Advanced** tab, and add these parameters to **Java Runtime Parameters**:

```
-Xms64m -Xmx256m -Xss6m
```

For information on parameters, see the JRE documentation

Improving Web Analysis Studio Performance

McAfee virus scans on servers and clients decrease performance. McAfee's Internet WebScanX, which searches internet files for viruses, scans `AnalyzerClient.jar`, which resides in the internet cache of the PC, every time Oracle's Hyperion® Web Analysis Studio is launched.

- To improve Web Analysis Studio performance:

- 1 Run the **SysInternal Filemon** program (from <http://www.sysinternals.com>) to determine which file analyzers are using and exclude those folder and files.
- 2 Disable **WebScanx** on `AnalyzerClient.jar`.
- 3 Disable **Allow Scanning Inside Archives**.

Importing ARU Files to Set User and Active Preferences

Web Analysis user preferences can be imported from an .ARU (XML format) file using a command-line utility.

The supporting import functionalities are discussed in these topics:

- “Creating Personal Variables” on page 274
- “Removing Personal Variables” on page 275
- “Creating POV Definitions” on page 275
- “Removing POV Definitions” on page 276
- “Adding Personal Database Connections” on page 276
- “Setting User Preferences” on page 277
- “Setting Active Preferences” on page 256

Note: Member names that contain special characters need modification; for example, `<Member Name="P&O" />` should be `<Member Name="P& ;O" />`

Processing Order

The ARU file is processed in this order:

1. Add database connection.
2. Remove Personal Variables
3. Remove POV
4. Add/replace Personal Variables
5. Add/replace POV
6. Define user preferences

Importing ARU Files

To import and execute an ARU file using the command line, enter this command:

```
ARUUtil.bat [ServerURL] [UserID] [ImportFile] [LogFile]
```

All arguments needed for the `ARUUtil.bat` are defined in `ARUImport.properties`.

Note: `ARUUtil.bat` (and `.sh`) is located in `BIPLUS_HOME/bin` and `ARUImport.properties` is located in `BIPLUS_HOME/common/config`.

Here is sample content of `ARUImport.properties`:

```
ServerURL=http://localhost:16000/WebAnalysis/processor
UserID=hyper1
Password=hyper1
ImportFile=D:\Welcome\create1user.xml
LogFile=d:\Welcome\Import.log
Encryption=false
```

| Property | Description |
|------------|----------------------------------|
| ServerURL | URL of started Web Analysis |
| UserID | Provisioned user name |
| Password | Provisioned user password |
| ImportFile | File path to import |
| LogFile | File path to log status messages |

Note: Login credentials of a user with administrators privileges must be used.

ARU Import File Format Supported Tags

- AnalyzerAdmin
- ModifyUsers
- User
- AddPersonalVariable
- Member
- AddPointOfView
- AxisSelections
- Dimension
- RemovePersonalVariable
- RemovePointOfView
- Settings
- Database

Note: For database connection references in the ‘Database’ tag, when creating Point of View and Personal Variables, users need to have either a link to the database connection or the database connection file in their database folder (for example, Users/<username>/Databases). Alternately, the ‘Database’ tag can contain a full folder path reference to the database connection file name. For example: Database=' '/Users/bi_admin/Databases/darobert2_sample_basic''

Creating Personal Variables

To create a Personal Variable, use this file format:

```
<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="hyper1">
<AddPersonalVariable Name="MarketPV" Database="DB_connection_name" Dimension="Market">
<Member Name="Market" SelectionMode="CHILDREN"/>
<Member Name="East" SelectionMode="CHILDREN"/>
</AddPersonalVariable>
</User>
</ModifyUsers>
</AnalyzerAdmin>
```

User and LoginID define the user login for which the Personal Variable is added. If a database connection exist with a specified name (see Database) for a specified user, a Personal Variable is added. The database connection file name is formed from the Database property by replacing «>» on «_». The connection file is searched in the Database folder of the specified user. If a connection file does not exist, the operation aborts. If a Personal Variable exists for the database connection, it is replaced by the new definition.

AddPersonalVariable initiates a request to create a Personal Variable. Member identifies the members within the dimension that make up the Personal Variable, and the selection mode for each member. Selection modes are: MEMBER, CHILDREN, DESCENDANT, PARENT, ANCESTOR, SIBLING, DIMBOTTOM, DIMTOP, LEVEL, GENERATION, and PREVIOUS. Default selection mode is MEMBER.

Removing Personal Variables

To remove a Personal Variable, use this file format:

```
<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="vefim">
<RemovePersonalVariable Name="MarketPV" Database="DB_connection_name"/>
</User>
</ModifyUsers>
</AnalyzerAdmin>
```

RemovePersonalVariable deletes the Personal Variable named *MarketPV* which is defined against database *DB_connection_name:Sample:Basic*.

Name defines the name of the Personal Variable to delete. Database defines the database connection file name.

Creating POV Definitions

To create a POV, use this file:

```
<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="vefim">
<AddPointOfView Name="BatchPOV" Database="DB_connection_name" Active="True">
<AxisSelections Axis="Columns">
<Dimension Name="Market">
<Member Name="East"/>
<Member Name="West" SelectionMode="CHILDREN"/>
</Dimension>
<Dimension Name="Product">
<Member Name="Product" SelectionMode="CHILDREN"/>
</Dimension>
</AxisSelections>
<AxisSelections Axis="Rows">
<Dimension Name="Year">
<Member Name="Year" SelectionMode="CHILDREN"/>
</Dimension>
</AxisSelections>
<AxisSelections Axis="Pages">
<Dimension Name="Scenario">
<Member Name="Scenario" SelectionMode="CHILDREN"/>
</Dimension>
</AxisSelections>
</AddPointOfView>
```

```
</User>
</ModifyUsers>
</AnalyzerAdmin>
```

AddPointOfView initiates a request to create a POV. The Name and Database name for the POV must be provided. The user may optionally indicate whether this POV should be active. Default Active value is *False*. If a POV of the same name exists for the database connection, it is replaced by the new definition.

AxisSelections identifies the axis to which the dimension selections are to be applied. Axes are Rows, Columns, Pages, and Filters. Default axis is Filters.

Dimension defines the dimension to be placed on the axis.

Member identifies the members within the specified dimension to be placed on the axis. Selection modes are: MEMBER, CHILDREN, DESCENDANT, PARENT, ANCESTOR, SIBLING, DIMBOTTOM, DIMTOP, LEVEL, GENERATION, and PREVIOUS. The default selection mode is MEMBER.

Removing POV Definitions

To remove a POV definition, use this file format:

```
<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="vefim">
<RemovePointOfView Name="123" Database="DB_connection_name"/>
</User>
</ModifyUsers>
</AnalyzerAdmin>
```

RemovePointOfView requests to delete the POV named *123* which is defined against database *DB_connection_name:Sample:Basic*.

Adding Personal Database Connections

To add a personal database connection, use this file format:

```
<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="hyper1">
<Database Name="DBName" Server="epmsd030" Database="Sample" Cube="Basic"
AliasTable="Long Names" Type="1" User="admin" Password="password" LoginMode="1">
</User>
</ModifyUsers>
</AnalyzerAdmin>
```

Database requests to add a database connection. If a database connection file with the same name exists, the operation is aborted.

| Database Attributes | Description | Permitted values | Example |
|---------------------|--|---|---|
| Name | Connection File name—File is created in /Users/ <i>user_name</i> /Databases/. <i>user_name</i> —User’s name, defined in tag User. For this, user connection is created. | | |
| Server | Essbase server host name | | |
| Database | Application Name | | |
| Cube | Cube Name | | |
| AliasTable | Which alias to use | | |
| Type | Type of connection to create. Only Analytic Services connections can be created. | 1 | |
| User | User’s login for connection | | |
| Password | Password for connection | | |
| LoginMode | Login mode of DB connection | 1 - Use User’s ID and Password; 2 - Prompt for User ID and Password; 3 - Enter User ID and Password | 1 - Example, [“hyper1”, “hyper1”] 2 - always show dialog “Database Logon” 3 - Use specified in User, Password properties values |

Setting User Preferences

Note: Some user preferences cannot be imported.

Import user preferences using this syntax:

```
<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="hyper1">
<Settings MissingZero="0" MissingText="n/a" PageComboBoxesStyle="0" ShowInfoPanel="0"
ShowFilterPanel="1" ShowToolBar="1" ShowMenu="0" DrillType="0" DrillMethod="1"
Wallpaper="" TileWallpaper="1" StretchWallpaper="0"/>
</User>
</ModifyUsers>
</AnalyzerAdmin>
```

Supported Preferences

- DrillMethod
- UseGridAPI

- ShowCurrency
- Wallpaper
- SuppressMissing
- ShowGridLines
- MissingZero
- MissingText
- HomePage
- DefaultView
- ShowInfoPanel
- ShowFilterPanel
- ShowToolbar
- ShowMenu
- PageComboBoxesStyle
- DrillType

Setting Active Preferences

Each user's Web Analysis preference file is located under `/Users/username/Profiles` and is invisible to all users. An administrator can copy, paste and maintain all user preference files. In addition, the `/Users/{Profiles}` folder is the common profiles directory, from which users can select any preference file to use as their *active* preference.

To set active preferences for a user during ARU import, the repository location of the file must be specified.

To set active preferences for a user, use this syntax:

```
<?xml version="1.0" encoding="UTF-8"?>
  <AnalyzerAdmin>
    <ModifyUsers>
      <User LoginID="PersParamEditor1">
        <SetGroupPrefs Name="/Users/&lt;Profiles&gt;/GlobalAdmin2Prefs4" />
      </User>
      <User LoginID="Analyst3">
        <SetGroupPrefs Name="/Users/&lt;Profiles&gt;/GlobalAdmin2Prefs4" />
      </User>
      <User LoginID="DataEditor1">
        <SetGroupPrefs Name="/Users/&lt;Profiles&gt;/GlobalAdmin2Prefs4" />
      </User>
      <User LoginID="DataSourcePublisher1">
        <SetGroupPrefs Name="/Users/&lt;Profiles&gt;/GlobalAdmin2Prefs4" />
      </User>
    </ModifyUsers>
  </AnalyzerAdmin>
<SetGroupPrefs Name="\Users\<Profiles>\group_prefs1"/>
```

Notes

1. In XML files, you must use `<` instead of `<` and `>` instead of `>`.
2. If more than one `SetGroupPrefs` element is specified for a user, the last preference file specified is established for that user.

Rename Utility

The Rename Utility is a standalone application designed to update objects in a Web Analysis repository based on the data source metadata changes. For example, if a member name, and/or dimension name changes in an Essbase® or Essbase cube, the utility searches the repository and changes all objects (such as documents and database connections) to reflect the metadata changes. The metadata change mapping must be created in a map file, as there is no direct link to the data source to detect the changes.

Please note, the utility supports only Essbase and Essbase data sources.

These objects are updated:

- Documents
- Database formatting
- Essbase and Essbase database connections
- Personal variable definitions
- POV definitions

These metadata changes are supported:

- Renaming references to existing dimensions (name and alias/description)
- Renaming references to existing members (name and alias/description)
- Adding references to new dimensions (default member selected)

Note: The Rename Utility installer is not included as part of the Web Analysis installer. See [“Rename Utility Installation” on page 281](#).

Rename Utility Important Considerations

- The Rename Utility modifies the content of various tables within the Web Analysis repository. You must back up *all* repositories before running this utility.
- The map file must correctly reflect old and new mapping names. If errors exist, these results may occur
 - Errors in old names:
 - No member is found; nothing is renamed
 - The wrong member is found; the wrong member is renamed
 - Errors in new names:

- ❑ A name does not match a member. When the document is executed, an error message is displayed, and the member is removed from the document.
- ❑ (A name matches a member (the wrong member). When the document is executed, an error message is not displayed, but the wrong member is selected).

Rename Utility Files

The Rename Utility files can be executed from the folder in which the utility resides, which is *installation_folder\renamer*.

Table 3 Rename Utility Folder Structure

| Files | Description |
|--|--|
| \renamer | Contains all necessary files to execute the Rename Utility |
| AnalyzerResource_xx.jar AnalyzerServer.jar log4j-1_2_8.jar | From the current Web Analysis install (for example, the deployed <code>WEB-INF\lib</code> folder) |
| db2java.zip db2jcc.jar mssqlserver.jar msutil.jar mysql-connector-java.jar oracle.zip | JDBC drivers for all database types supported by the Rename Utility |
| xercesImpl.jar xml-apis.jar | Provide XML support |
| renamer-map.xml | Map file used to define all of the dimensions and members to rename; see the “Rename Utility Map File” on page 281 |
| Renamer.properties | Provides default choices to the input fields in the Rename Utility; see “Renamer.properties” on page 285 |
| renamer-services.xml | Defines ATF services by the Rename Utility. |
| renamer-map.dtd renamer-map.xsd | Currently unused; represent an attempt to develop a DTD or an XML Schema for map file validation |
| RenameUtil.bat RenameUtil.sh | Start the utility on Windows or UNIX platforms, respectively. |

| Files | Description |
|---|--|
| <pre>\renamer\renamer common.profile db2.profile hsqldb.profile mssqldb.profile mssqldb7.profile mysql.profile oracle.profile</pre> | Contains repository profiles used to connect to the supported database types |

Rename Utility Installation

► To install the Rename Utility:

- 1 **Back up all repositories before using the Rename Utility.**
- 2 **Install Web Analysis.**
- 3 **Uncompress `rename_utility.zip` to the Rename Utility folder (for example, `C:\renamer`).**
- 4 **Copy these files from the Web Analysis `WEB-INF\lib` folder to the Rename Utility folder:**
 - `AnalyzerServer.jar`
 - `AnalyzerResource_*.jar`
 - `log4j-1.2.8.jar`
- 5 **Verify that the `JAVA_HOME` environment variable exists and points to a Java 1.4 runtime home folder (for example, `C:\jdk1.4.2`).**

You can also edit `RenameUtil.bat` or `RenameUtil.sh` to set the `JAVA_HOME` environment.
- 6 **Optional: Edit `Renamer.properties` to set the default choices for running the Rename Utility as described in [“Renamer.properties” on page 285](#).**
- 7 **Launch the start script (`RenameUtil.bat` or `RenameUtil.sh`).**

Rename Utility Map File

The Rename Utility map file defines the dimensions and members to be renamed in the repository. It is an XML file that defines the complete logical path to each dimension and member. Here is a sample map file (with line numbers) along with a description of each section:

```
[01] <map name="Rename Map 01">
[02]   <server name="essbase9x"
[03]     <serverAlias>essbase9x.hyperion.comserverAlias>essbase9x.hyperion.com>
[04]     <application name="Sample">
```

```

[05]     <database name="Basic">
[06]
[07]         <dim oldName="Year" newName="NewYear" />
[08]
[09]         <dim oldName="Market" newName="NewMarket"
[10]             oldAlias="Market" newAlias="My New Market">
[11]             <member oldName="South" newName="NewSouth"/>
[12]             <member oldName="East" newName="NewEast"/>
[13]             oldAlias="Eastern" newAlias="New Eastern">
[14]         </dim>
[15]
[16]         <newDim name="NewDim" alias="NewDim Alias" />
[17]
[18]         <newDim name="Attr" alias="Attribute" parentDim="product">
[19]
[20]             <newDim name="Features" alias="Prod Features">
[21]                 <attrDim name="Attr1"/>
[22]                 <attrDim name="Attr2"/>
[23]                 <attrDim name="Attr3"/>
[24]             </newDim>
[25]
[26]         </database>
[27]     </application>
[28] </server>
[29]
[30] <server name="server2">
[31]     <...>
[xx] </server>
[xy]
[xz] </map>

```

map Element

The topmost element of the map file must be the `<map>` element shown on line [01]. It must have a name attribute, which can be any text enclosed in quotes. There can be only one `<map>` element in a map file. This element is used internally to contain the list of servers included in this map file. It can contain only one or more `<server>` elements.

server Element

This element identifies an Essbase server that has renamed dimensions or members. Examples are shown on lines [02] and [30]. As shown in the example, there can be multiple `server` elements in a map file. It has the single attribute `name` which is required. This name must match the server name in the Essbase database connection stored in the Web Analysis repository. No DNS or hosts lookup is performed, and no IP address translation is done. Thus, `<server name="127.0.0.1">` is not the same as `<server name="localhost">`. The `server` element can contain only one or more `application` elements.

serverAlias Element

This element enables the user to specify alternate names that identify the Essbase server. For example, the server, `ess9x` might also be known as `ess9x.hyperion.com`, `172.27.31.126`, or `localhost`. Using `serverAlias` elements in the map file allows the dimension and member mappings for a server to be applied to that server, regardless of how it is referenced in the

repository. An example is shown on line [03]. This example associates all dimensions and members for the server *essbase9x* with the alternate name *essbase9x.hyperion.com*. The `serverAlias` element does not have attributes and its body specifies the server alias.

application Element

This element identifies a specific instance of an Essbase application. An example is shown on line [04]. The `application` element has one attribute, *name*, which is required. This name must match the application name in the Essbase database connection stored in the Web Analysis repository. The `application` element can contain only one or more `database` elements.

database Element

This element identifies a specific instance of an Essbase database. An example is shown on line [05]. The `database` element has one attribute, *name*, which is required. This name must match the database name in the Essbase database connection stored in the Web Analysis repository. The `database` element must contain one or more `dim` or `newDim` elements.

dim Element

This element identifies a specific instance of an Essbase dimension within a unique database. Examples are shown on lines [07] and [09]. The `dim` element must contain the attribute `oldName` to identify the dimension. There are three optional attributes for each element:

- `newName`—New name for this dimension
- `oldAlias`—Current alias for this dimension
- `newAlias`—New alias for this dimension

If there is no `newName` or `newAlias` attribute for the `dim` element, it is not renamed. An example of this could be the case when a dimension name did not change, but members within that dimension were renamed. The `oldAlias` attribute should be included if it is defined in the outline, so that top level member selections using the alias can be identified. This is necessary because in Essbase, the top level member of a dimension uses the dimension name and alias. Because members may be stored by name or alias in repository objects, `oldName` and `oldAlias` must be included for all `dim` elements. This element can contain zero or more `member` elements only. This would be the case if only the dimension name or alias changed, but no members in that dimension were renamed.

member Element

This element identifies a specific instance of an Essbase member within a unique dimension. Examples are shown on lines [11] and [12]. The `member` element must contain the attribute `oldName` to identify the member. There are three optional attributes for each element:

- `newName`—New name for this member
- `oldAlias`—Current alias for this member
- `newAlias`—New alias for this member

The `oldAlias` attribute should be included if it is defined in the outline, so that member selections using the alias can be identified. Because members may be stored by name or alias in repository objects, `oldName` and `oldAlias` must be included for all `member` elements. This element may not contain other elements.

newDim Element

This element identifies a specific instance of a new Essbase dimension within a unique database. The `newDim` element must contain the attribute `name` to uniquely name the dimension. An optional attribute `alias` may exist to define an alias for this dimension. An example of this is shown on line [16].

If the dimension is an attribute dimension, the required XML attribute `parentDim` must be included in the element to associate the attribute dimension with its parent dimension. An example of this is shown above on line [18].

Finally, if the dimension has associated attribute dimensions, they must be defined in `attrDim` elements. This is the only case when the `newDim` element may contain child elements, and there can be multiple `attrDim` elements in it.

attrDim Element

This element identifies a specific instance of an Oracle Essbase attribute dimension to associate with a new dimension. Examples are shown on lines [21], [22], and [23]. The `attrDim` element must contain the attribute `name` to uniquely identify the attribute dimension. This element cannot contain other elements.

Using the Rename Utility

► To use the Rename Utility:

- 1 **Make a backup of the Web Analysis repository.**
- 2 **Create a map file that defines old and new values in the data source that need to be replaced in the Web Analysis repository. See [“Rename Utility Map File” on page 281](#).**
- 3 **Launch the start script** (`RenameUtil.bat` or `RenameUtil.sh`).
- 4 **Select the Repository Type** (Microsoft SQL Server, DB2, MySQL or Oracle).
- 5 **Enter the necessary RDBMS Repository connection fields:**
 - Server Name
 - Database Name / Tablespace Name (Oracle)
 - Port Number
 - SID (Oracle only)
 - Web Analysis User
 - Oracle's Hyperion® Web Analysis Password
- 6 **Select the map file location.**

7 Click **Finish**.

The Confirm tab is displayed with connection confirmation and map file verification.

8 Click **Rename**.

A confirmation message is displayed.

9 Click **Yes** to proceed with processing.

The process begins with all activity listed in the Confirm tab. For example:

```
Preparing rename mapping rules...
Reading rename mappings from renamer-map.xml
Building list of rename mappings.

Processing Web Analysis Reports
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Product Sales" (ID =
214)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Product
Profitability" (ID = 217)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Regional Analysis" (ID =
220)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/KPI Scorecard" (ID = 223)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Expense Analysis" (ID =
226)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/State Rankings" (ID =
229)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/High\Low States" (ID =
232)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Margin Chart" (ID = 235)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Product Share" (ID = 238)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Product Budget" (ID =
241)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Sales Forecast" (ID =
244)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Profit vs Sales" (ID =
247)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/KPI Details" (ID = 250)
```

Renamer.properties

The `Renamer.properties` file provides the default choices displayed by the Rename Utility in the Hyperion Web Analysis Renamer dialog box.

Use of `Renamer.properties` is optional; it eliminates the need to enter information that is repeated each time the utility is run. If properties are not included in `Renamer.properties`, the corresponding input fields are left blank. Users can enter values for fields from within the Renamer Utility. `Renamer.properties` provides descriptive comments and sample entries for each property, and contains these variables:

| Variable Name | Description |
|---------------|---------------|
| # MapFile | Map file name |

| Variable Name | Description |
|----------------------|--|
| # ReposServer | Server name where the repository exist |
| # ReposType | Type of repository selected |
| # ReposSID | Repository SID |
| # ReposName | Repository database name |
| # ReposUser | User name |
| # ReposPassword | User password |

Glossary

! See bang character.

#MISSING See missing data.

access permissions A set of operations that a user can perform on a resource.

accessor Input and output data specifications for data-mining algorithms.

account blocking The process by which accounts accept input data in the consolidated file. Blocked accounts do not receive their value through the additive consolidation process.

account eliminations Accounts which have their values set to zero in the consolidated file during consolidation.

account type A property that determines how an account's value flows over time and its sign behavior. Account type options can include expense, income, asset, liability, and equity.

accountability map A visual, hierarchical representation of the responsibility, reporting, and dependency structure of the accountability teams (also known as critical business areas) in an organization.

active service A service whose Run Type is set to Start rather than to Hold.

active-active high availability system A system in which all the available members can service requests, and no member is idle. An active-active system generally provides more scalability options than an active-passive system. Contrast with active-passive high availability system.

active-passive high availability system A system with active members, which are always servicing requests, and passive members that are activated only when an active member fails. Contrast with active-active high availability system.

activity-level authorization Defines user access to applications and the types of activities they can perform on applications, independent of the data that will be operated on.

ad hoc report An online analytical query that an end user creates dynamically.

adapter Software that enables a program to integrate with data and metadata from target and source systems.

adaptive states Interactive Reporting Web Client level of permission.

adjustment See journal entry.

Advanced Relational Access The integration of a relational database with an Essbase multidimensional database so that all data remains in the relational database and is mapped to summary-level data in the Essbase database.

agent An Essbase server process that starts and stops applications and databases, manages connections from users, and handles user-access security. The agent is referred to as ESSBASE.EXE.

aggregate cell A cell comprising several cells. For example, a data cell that uses Children(Year) expands to four cells containing Quarter 1, Quarter 2, Quarter 3, and Quarter 4 data.

aggregate function A type of function, such as sum or calculation of an average, that summarizes or performs analysis on data.

aggregate limit A limit placed on an aggregated request line item or aggregated metatopic item.

aggregate storage database The database storage model designed to support large-scale, sparsely distributed data which is categorized into many, potentially large dimensions. Upper level members and formulas are dynamically calculated, and selected data values are aggregated and stored, typically with improvements in overall aggregation time.

aggregate view A collection of aggregate cells based on the levels of the members within each dimension. To reduce calculation time, values are pre-aggregated and stored as aggregate views. Retrievals start from aggregate view totals and add up from there.

aggregation The process of rolling up and storing values in an aggregate storage database; the stored result of the aggregation process.

aggregation script In aggregate storage databases only, a file that defines a selection of aggregate views to be built into an aggregation.

alias table A table that contains alternate names for members.

alternate hierarchy A hierarchy of shared members. An alternate hierarchy is based upon an existing hierarchy in a database outline, but has alternate levels in the dimension. An alternate hierarchy allows the same data to be seen from different points of view.

ancestor A branch member that has members below it. For example, the members Qtr2 and 2006 are ancestors of the member April.

appender A Log4j term for destination.

application 1) A software program designed to run a specific task or group of tasks such as a spreadsheet program or database management system. 2) A related set of dimensions and dimension members that are used to meet a specific set of analytical requirements, reporting requirements, or both.

application administrator A person responsible for setting up, configuring, maintaining, and controlling an application. Has all application privileges and data access permissions.

application currency The default reporting currency for the application.

Application Migration Utility A command-line utility for migrating applications and artifacts.

application server cluster A loosely joined group of application servers running simultaneously, working together for reliability and scalability, and appearing to users as one application server instance. See also vertical application cluster and horizontal application cluster.

area A predefined set of members and values that makes up a partition.

arithmetic data load A data load that performs operations on values in the database, such as adding 10 to each value.

artifact An individual application or repository item; for example, scripts, forms, rules files, Interactive Reporting documents, and financial reports. Also known as an object.

assemblies Installation files for EPM System products or components.

asset account An account type that stores values that represent a company's assets.

assignment The association of a source and destination in the allocation model that controls the direction of allocated costs or revenue flow.

attribute A characteristic of a dimension member. For example, Employee dimension members may have attributes of Name, Age, or Address. Product dimension members can have several attributes, such as a size and flavor.

attribute association A relationship in a database outline whereby a member in an attribute dimension describes a characteristic of a member of its base dimension. For example, if product 100-10 has a grape flavor, the product 100-10 has the Flavor attribute association of grape. Thus, the 100-10 member of the Product dimension is associated with the Grape member of the Flavor attribute dimension.

Attribute Calculations dimension A system-defined dimension that performs these calculation operations on groups of members: Sum, Count, Avg, Min, and Max. This dimension is calculated dynamically and is not visible in the database outline. For example, using the Avg member, you can calculate the average sales value for Red products in New York in January.

attribute dimension A type of dimension that enables analysis based on the attributes or qualities of dimension members.

attribute reporting A reporting process based on the attributes of the base dimension members. See also base dimension.

attribute type A text, numeric, Boolean, date, or linked-attribute type that enables different functions for grouping, selecting, or calculating data. For example, because the Ounces attribute dimension has the type numeric, the number of ounces specified as the attribute of each product can be used to calculate the profit per ounce for that product.

authentication Verification of identity as a security measure. Authentication is typically based on a user name and password. Passwords and digital signatures are forms of authentication.

authentication service A core service that manages one authentication system.

auto-reversing journal A journal for entering adjustments that you want to reverse in the next period.

automated stage A stage that does not require human intervention; for example, a data load.

axis (1) A straight line that passes through a graphic used for measurement and categorization. (2) A report aspect used to arrange and relate multidimensional data, such as filters, pages, rows, and columns. For example, for a data query in Simple Basic, an axis can define columns for values for Qtr1, Qtr2, Qtr3, and Qtr4. Row data would be retrieved with totals in the following hierarchy: Market, Product.

backup A duplicate copy of an application instance.

balance account An account type that stores unsigned values that relate to a particular time.

balanced journal A journal in which the total debits equal the total credits.

bang character (!) A character that terminates a series of report commands and requests information from the database. A report script must be terminated with a bang character; several bang characters can be used within a report script.

base currency The currency in which daily business transactions are performed.

base dimension A standard dimension that is associated with one or more attribute dimensions. For example, assuming products have flavors, the Product dimension is the base dimension for the Flavors attribute dimension.

base entity An entity at the bottom of the organization structure that does not own other entities.

batch calculation Any calculation on a database that is done in batch; for example, a calculation script or a full database calculation. Dynamic calculations are not considered to be batch calculations.

batch file An operating system file that can call multiple ESSCMD scripts and run multiple sessions of ESSCMD. On Windows-based systems, batch files have BAT file extensions. On UNIX, batch files are written as a shell script.

Batch Loader An FDM component that enables the processing of multiple files.

batch POV A collection of all dimensions on the user POV of every report and book in the batch. While scheduling the batch, you can set the members selected on the batch POV.

batch processing mode A method of using ESSCMD to write a batch or script file that can be used to automate routine server maintenance and diagnostic tasks. ESSCMD script files can execute multiple commands and can be run from the operating system command line or from within operating system batch files. Batch files can be used to call multiple ESSCMD scripts or run multiple instances of ESSCMD.

block The primary storage unit which is a multidimensional array representing the cells of all dense dimensions.

block storage database The Essbase database storage model categorizing and storing data based on the sparsity of data values defined in sparse dimensions. Data values are stored in blocks, which exist only for sparse dimension members for which there are values.

Blocked Account An account that you do not want calculated in the consolidated file because you want to enter it manually.

book 1) In Financial Reporting, a container that holds a group of similar documents. Books may specify dimension sections or dimension changes. 2) In Data Relationship Management, a collection of exports that can be run together as a group. Export results can be combined together or output separately.

book POV The dimension members for which a book is run.

bookmark A link to a reporting document or a Web site, displayed on a personal page of a user. The types of bookmarks are My Bookmarks and image bookmarks.

bounding rectangle The required perimeter that encapsulates the Interactive Reporting document content when embedding Interactive Reporting document sections in a personal page, specified in pixels for height and width or row per page.

broadcast message A simple text message sent by an administrator to a user who is logged on to a Planning application. The message details information such as system availability, notification of application refresh, or application backups.

build method A method used to modify database outlines. Choice of a build method is based on the format of data in data source files.

business process A set of activities that collectively accomplish a business objective.

business rules Logical expressions or formulas that are created within an application to produce a desired set of resulting values.

cache A buffer in memory that holds data temporarily.

calc script A set of commands that define how a database is consolidated or aggregated. A calculation script may also contain commands that specify allocation and other calculation rules separate from the consolidation process.

Calculated Accounts Accounts with formulas that you cannot alter. These formulas are fixed to maintain the accounting integrity of the model that you are building. For example, the formula for Net Income, a Calculated Account, is modeled into Strategic Finance and cannot be changed in historical or forecast periods.

calculated member in MaxL DML A member designed for analytical purposes and defined in the optional WITH section of a MaxL DML query.

Calculation Manager A module of Enterprise Performance Management Architecture (EPMA) that Planning and Financial Management users can use to design, validate, and administrate business rules in a graphical environment. c

calculation status A consolidation status that indicates that some values or formula calculations have changed. You must reconsolidate to get the correct values for the affected entity.

calendar User-defined time periods and their relationship to each other. Q1, Q2, Q3, and Q4 comprise a calendar or fiscal year.

cascade The process of creating multiple reports for a subset of member values.

Catalog pane An area that displays a list of elements available to the active section. If Query is the active section, a list of database tables is displayed. If Pivot is the active section, a list of results columns is displayed. If Dashboard is the active section, a list of embeddable sections, graphic tools, and control tools are displayed.

categories Groupings by which data is organized. For example, Month.

cause and effect map A map that depicts how the elements that form your corporate strategy relate and how they work together to meet your organization's strategic goals. A Cause and Effect map tab is automatically created for each Strategy map.

CDF See custom-defined function.

CDM See custom-defined macro.

cell (1) The data value at the intersection of dimensions in a multidimensional database; the intersection of a row and a column in a worksheet. (2) A logical group of nodes belonging to one administrative domain.

cell note A text annotation for a cell in an Essbase database. Cell notes are a type of LRO.

CHANGED status Consolidation status that indicates data for an entity has changed.

chart template A template that defines the metrics to display in Workspace charts.

child A member with a parent above it in the database outline.

choice list A list of members that a report designer can specify for each dimension when defining the report's point of view. A user who wants to change the point of view for a dimension that uses a choice list can select only the members specified in that defined member list or those members that meet the criteria defined in the function for the dynamic list.

clean block A data block in which the database is fully calculated, if a calculation script calculates all dimensions at once, or if the SET CLEARUPDATESTATUS command is used in a calculation script.

cluster An array of servers or databases that behave as a single resource which share task loads and provide failover support; eliminates one server or database as a single point of failure in a system.

cluster interconnect A private link used by a hardware cluster for heartbeat information, to detect node failure.

cluster services Software that manages cluster member operations as a system. With cluster services, you can define a set of resources and services to monitor through a heartbeat mechanism between cluster members and to move these resources and services to a different cluster member as efficiently and transparently as possible.

clustered bar charts Charts in which categories are viewed side-by-side; used only with vertical bar charts.

code page A mapping of bit combinations to a set of text characters. Different code pages support different sets of characters. Each computer contains a code page setting for the character set requirements of the language of the computer user. In the context of this document, code pages map characters to bit combinations for non-Unicode encodings. See also encoding.

column In Data Relationship Management, a field of data associated with an import source or the results of a query, compare, validation, or export.

committed access An Essbase Kernel Isolation Level setting that affects how Essbase handles transactions. Under committed access, concurrent transactions hold long-term write locks and yield predictable results.

computed item A virtual column (as opposed to a column that is physically stored in the database or cube) that can be calculated by the database during a query, or by Interactive Reporting Studio in the Results section. Computed items are calculations of data based on functions, data items, and operators provided in the dialog box and can be included in reports or reused to calculate other data.

connection file See Interactive Reporting connection file (.oce)

consolidated file (Parent) A file into which all of the business unit files are consolidated; contains the definition of the consolidation.

consolidation The process of aggregating data from dependent entities to parent entities. For example, if the dimension Year consists of the members Qtr1, Qtr2, Qtr3, and Qtr4, its consolidation is Year.

consolidation file (*.cns) A graphical interface that enables you to add, delete, or move Strategic Finance files in the consolidation process using either a Chart or Tree view. It also enables you to define and modify the consolidation.

consolidation rule The rule that is executed during the consolidation of the node of the hierarchy. This rule can contain customer-specific formulas appropriate for the correct consolidation of parent balances. Elimination processing can be controlled within these rules.

content Information stored in the repository for any type of file.

content browser A component that enables users to browse and select content to be placed on a Workspace Page.

context variable A variable that is defined for a particular task flow to identify the context of the taskflow instance.

contribution The value added to a parent from a child entity. Each child has a contribution to its parent.

controls groups Groupings used in FDM to maintain and organize certification and assessment information, especially helpful for meeting Sarbanes-Oxley requirements.

conversion rate See exchange rate.

cookie A segment of data placed on your computer by a Web site.

correlated subqueries Subqueries that are evaluated once for every row in the parent query; created by joining a topic item in the subquery with a topic in the parent query.

critical business area (CBA) An individual or a group organized into a division, region, plant, cost center, profit center, project team, or process; also called accountability team or business area.

critical success factor (CSF) A capability that must be established and sustained to achieve a strategic objective; owned by a strategic objective or a critical process and is a parent to one or more actions.

crosstab reporting Reporting that categorizes and summarizes data in table format. The table cells contain summaries of the data that fit within the intersecting categories. For example, a crosstab report of product sales information could show size attributes, such as Small and Large, as column headings and color attributes, such as Blue and Yellow, as row headings. The cell in the table where Large and Blue intersect could contain the total sales of all Blue products that are sized Large.

cube A block of data that contains three or more dimensions. An Essbase database is a cube.

cube deployment In Essbase Studio, the process of setting load options for a model to build an outline and load data into an Essbase application and database.

cube schema In Essbase Studio, the metadata elements, such as measures and hierarchies, representing the logical model of a cube.

currency conversion A process that converts currency values in a database from one currency into another. For example, to convert one U. S. dollar into the European euro, the exchange rate (for example, 0.923702) is multiplied by the dollar (1×0.923702). After conversion, the European euro amount is .92.

Currency Overrides A feature allowing the selected input method for any input period to be overridden to enable input of that period's value as Default Currency/Items. To override the input method, enter a pound sign (#) before or after the number.

currency partition A dimension type that separates local currency members from a base currency, as defined in an application. Identifies currency types, such as Actual, Budget, and Forecast.

custom calendar Any calendar created by an administrator.

custom dimension A dimension created and defined by users. Channel, product, department, project, or region could be custom dimensions.

custom property A property of a dimension or dimension member that is created by a user.

custom report A complex report from the Design Report module, composed of any combination of components.

custom-defined function (CDF) Essbase calculation functions developed in Java and added to the standard Essbase calculation scripting language using MaxL. See also custom-defined macro.

custom-defined macro (CDM) Essbase macros written with Essbase calculator functions and special macro functions. Custom-defined macros use an internal Essbase macro language that enables the combination of calculation functions and they operate on multiple input parameters. See also custom-defined function.

cycle through Perform multiple passes through a database while calculating it.

dashboard A collection of metrics and indicators that provide an interactive summary of your business. Dashboards enable you to build and deploy analytic applications.

data cache A buffer in memory that holds uncompressed data blocks.

data cell See cell.

data file cache A buffer in memory that holds compressed data (PAG) files.

data form A grid display that enables users to enter data into the database from an interface such as a Web browser, and to view and analyze data or related text. Certain dimension member values are fixed, giving users a specific view into the data.

data function Function that computes aggregate values, including averages, maximums, counts, and other statistics that summarize groupings of data.

data load location In FDM, a reporting unit responsible for submitting source data into the target system. Typically, one FDM data load location exists for each source file loaded to the target system.

data load rules A set of criteria that determines how to load data from a text-based file, a spreadsheet, or a relational data set into a database.

data lock A feature that prevents changes to data according to specified criteria, such as a period or scenario.

data mining The process of searching through an Essbase database for hidden relationships and patterns in a large amount of data.

data model A representation of a subset of database tables.

data value See cell.

database connection A file that stores definitions and properties used to connect to data sources and enables database references to be portable and widely used.

date measure In Essbase, a member tagged as Date in the dimension where measures are represented. The cell values are displayed as formatted dates. Dates as measures can be useful for analysis types that are difficult to represent using the Time dimension. For example, an application may need to track acquisition dates for a series of capital assets, but the acquisition dates span too large a period to allow for feasible Time dimension modeling. See also typed measure.

Default Currency Units The unit scale of data. For example, If you select to define your analysis in thousands and enter 10, this unit is interpreted as 10,000.

dense dimension In block storage databases, a dimension likely to contain data for every combination of dimension members. For example, time dimensions are often dense because they can contain all combinations of all members. Contrast with sparse dimension.

dependent entity An entity that is owned by another entity in the organization.

derived text measure In Essbase Studio, a text measure whose values are governed by a predefined rule expressed as a range. For example, a derived text measure, called "Sales Performance Index," based on a measure Sales, could consist of the values "High," "Medium," and "Low." This derived text measure is defined to display "High," "Medium," and "Low" depending on the range in which the corresponding sales values fall. See also text measure.

descendant Any member below a parent in the database outline. In a dimension that includes years, quarters, and months, the members Qtr2 and April are descendants of the member Year.

Design Report An interface in Web Analysis Studio for designing custom reports, from a library of components.

destination 1) In Business Rules, a block of the database where calculated values are stored; 2) In Profitability and Cost Management, the association of a source and destination in the allocation model that controls the direction of allocated costs or revenue flow.

destination currency The currency to which balances are converted. You enter exchange rates and convert from the source currency to the destination currency. For example, when you convert from EUR to USD, the destination currency is USD.

detail chart A chart that provides the detailed information that you see in a Summary chart. Detail charts appear in the Investigate Section in columns below the Summary charts. If the Summary chart shows a Pie chart, then the Detail charts below represent each piece of the pie.

dimension A data category used to organize business data for the retrieval and preservation of values. Dimensions usually contain hierarchies of related members grouped within them. For example, a Year dimension often includes members for each time period, such as quarters and months.

dimension build The process of adding dimensions and members to an Essbase outline.

dimension build rules Specifications, similar to data load rules, that Essbase uses to modify an outline. The modification is based on data in an external data source file.

dimension tab In the Pivot section, the tab that enables you to pivot data between rows and columns.

dimension table (1) A table that includes numerous attributes about a specific business process. (2) In Essbase Integration Services, a container in the OLAP model for one or more relational tables that define a potential dimension in Essbase.

dimension type A dimension property that enables the use of predefined functionality. Dimensions tagged as time have a predefined calendar functionality.

dimensionality In MaxL DML, the represented dimensions (and the order in which they are represented) in a set. For example, the following set consists of two tuples of the same dimensionality, because they both reflect the dimensions (Region, Year): { (West, Feb), (East, Mar) }

direct rate A currency rate that you enter in the exchange-rate table. The direct rate is used for currency conversion. For example, to convert balances from JPY to USD, in the exchange-rate table, enter a rate for the period/scenario where the source currency is JPY and the destination currency is USD.

dirty block A data block containing cells that have been changed since the last calculation. Upper-level blocks are marked as dirty if their child blocks are dirty (that is, if they have been updated).

display type One of three Web Analysis formats saved to the repository: spreadsheet, chart, and pinboard.

dog-ear The flipped page corner in the upper-right corner of the chart header area.

domain In data mining, a variable representing a range of navigation within data.

drill-down Navigation through the query result set using the dimensional hierarchy. Drilling down moves the user perspective from aggregated data to detail. For example, drilling down can reveal hierarchical relationships between years and quarters or quarters and months.

drill-through The navigation from a value in one data source to corresponding data in another source.

driver In Profitability and Cost Management, an allocation method that describes the mathematical relationship between the sources that use the driver and the destinations to which those sources allocate cost or revenue. For Business Modeling, see also cost driver and activity driver.

duplicate alias name A name that occurs more than once in an alias table and can be associated with more than one member in a database outline. Duplicate alias names can be used with duplicate member outlines only.

duplicate member name Multiple occurrences of a member name in a database, with each occurrence representing a different member. For example, a database has two members named New York. One member represents New York state and the other member represents New York city.

duplicate member outline A database outline containing duplicate member names.

Dynamic Calc and Store members Members in a block storage outline that Essbase calculates only upon the first retrieval of the value. Essbase then stores the calculated value in the database. Subsequent retrievals do not require calculating.

Dynamic Calc members Members in a block storage outline that Essbase calculates only at retrieval time. Essbase discards calculated values after completing the retrieval request.

dynamic calculation In Essbase, a calculation that occurs only when you retrieve data on a member that is tagged as Dynamic Calc or Dynamic Calc and Store. The member's values are calculated at retrieval time instead of being precalculated during batch calculation.

dynamic hierarchy In aggregate storage database outlines only, a hierarchy in which members are calculated at retrieval time.

dynamic member list A system-created named member set that is based on user-defined criteria. The list is refreshed automatically whenever it is referenced in the application. As dimension members are added and deleted, the list automatically reapplies the criteria to reflect the changes.

dynamic reference A pointer in the rules file to header records in a data source.

dynamic report A report containing data that is updated when you run the report.

Dynamic Time Series A process that performs period-to-date reporting in block storage databases.

dynamic view account An account type indicating that account values are calculated dynamically from the data that is displayed.

Eliminated Account An account that does not appear in the consolidated file.

elimination The process of zeroing out (eliminating) transactions between entities within an organization.

employee A user responsible for, or associated with, specific business objects. Employees need not work for an organization; for example, they can be consultants. Employees must be associated with user accounts, for authorization purposes.

encoding A method for mapping bit combinations to characters for creating, storing, and displaying text. Each encoding has a name; for example, UTF-8. Within an encoding, each character maps to a specific bit combination; for example, in UTF-8, uppercase A maps to HEX41. See also code page, locale.

ending period A period enabling you to adjust the date range in a chart. For example, an ending period of "month" produces a chart showing information through the end of the current month.

Enterprise View An Administration Services feature that enables management of the Essbase environment from a graphical tree view. From Enterprise View, you can operate directly on Essbase artifacts.

entity A dimension representing organizational units. Examples: divisions, subsidiaries, plants, regions, products, or other financial reporting units.

EPM Oracle home A subdirectory of Middleware home containing the files required by EPM System products. The EPM Oracle home location is specified during installation with EPM System Installer.

Equity Beta The riskiness of a stock, measured by the variance between its return and the market return, indicated by an index called "beta." For example, if a stock's return normally moves up or down 1.2% when the market moves up or down 1%, the stock has a beta of 1.2.

essbase.cfg An optional configuration file for Essbase. Administrators may edit this file to customize Essbase Server functionality. Some configuration settings may also be used with Essbase clients to override Essbase Server settings.

EssCell A function entered into a cell in Essbase Spreadsheet Add-in to retrieve a value representing an intersection of specific Essbase database members.

ESSCMD A command-line interface for performing Essbase operations interactively or through batch script files.

ESSLANG The Essbase environment variable that defines the encoding used to interpret text characters. See also encoding.

ESSMSH See MaxL Shell.

exceptions Values that satisfy predefined conditions. You can define formatting indicators or notify subscribing users when exceptions are generated.

exchange rate type An identifier for an exchange rate. Different rate types are used because there may be multiple rates for a period and year. Users traditionally define rates at period end for the average rate of the period and for the end of the period. Additional rate types are historical rates, budget rates, forecast rates, and so on. A rate type applies to a specific time.

expense account An account that stores periodic and year-to-date values that decrease net worth if they are positive.

Extensible Markup Language (XML) A language comprising a set of tags used to assign attributes to data that can be interpreted between applications according to a schema.

external authentication Logging on to Oracle EPM System products with user information stored outside the application. The user account is maintained by the EPM System, but password administration and user authentication are performed by an external service, using a corporate directory such as Oracle Internet Directory (OID) or Microsoft Active Directory (MSAD).

externally triggered events Non-time-based events for scheduling job runs.

Extract, Transform, and Load (ETL) Data-source-specific programs for extracting data and migrating it to applications.

extraction command An Essbase reporting command that handles the selection, orientation, grouping, and ordering of raw data extracted from a database; begins with the less-than (<) character.

fact table The central table in a star join schema, characterized by a foreign key and elements drawn from a dimension table. This table typically contains numeric data that can be related to all other tables in the schema.

failover The ability to switch automatically to a redundant standby database, server, or network if the primary database, server, or network fails or is shut down. A system that is clustered for failover provides high availability and fault tolerance through server redundancy and fault-tolerant hardware, such as shared disks.

Favorites gadget A gadget that contains links to Reporting and Analysis documents and URLs. See also gadget.

file delimiter A character, such as a comma or tab, that separates fields in a data source.

filter A constraint on data sets that restricts values to specific criteria; for example, to exclude certain tables, metadata, or values, or to control access.

flow account An unsigned account that stores periodic and year-to-date values.

footer Text or images at the bottom of report pages, containing dynamic functions or static text such as page numbers, dates, logos, titles or file names, and author names.

format string 1) In Essbase, a method for transforming the way cell values are displayed. 2) In FDM, a parameter of a Format or Formatted Date derived property that indicates the format in which a property value should be returned.

formula In Data Relationship Management, business logic used by a derived property to dynamically calculate a property value.

frame An area on the desktop. Two main areas: the navigation and workspace frames.

free-form grid An object for presenting, entering, and integrating data from different sources for dynamic calculations.

free-form reporting Creating reports by entering dimension members or report script commands in worksheets.

function In Data Relationship Management, a syntactic element of a derived property formula that accepts parameters and returns dynamic values.

gadget A simple, specialized, lightweight application that provides easy viewing of EPM content and enables access to core Reporting and Analysis functionality.

geneology data Additional data that is optionally generated after allocation calculations. This data enables reporting on all cost or revenue flows from start to finish through all allocation steps.

generation A layer in a hierarchical tree structure that defines member relationships in a database. Generations are ordered incrementally from the top member of the dimension (generation 1) down to the child members. Use the unique generation name to identify a layer in the hierarchical tree structure.

generic jobs Non-SQR Production Reporting or non-Interactive Reporting jobs.

global report command A command in a running report script that is effective until it is replaced by another global command or the file ends.

grid POV A means for specifying dimension members on a grid without placing dimensions in rows, columns, or page intersections. A report designer can set POV values at the grid level, preventing user POVs from affecting the grid. If a dimension has one grid value, you put the dimension into the grid POV instead of the row, column, or page.

group A container for assigning similar access permissions to multiple users.

GUI Graphical user interface

hardware cluster a collection of computers that provides a single view of network services (for example, an IP address) or application services (such as databases and Web servers) to clients of these services. Each node in a hardware cluster is a standalone server that runs its own processes. These processes can communicate with one another to form what looks like a single system that cooperatively provides applications, system resources, and data to users.

high availability A system attribute that enables an application to continue to provide services in the presence of failures. This is achieved through removal of single points of failure, with fault-tolerant hardware, as well as server clusters; if one server fails, processing requests are routed to another server.

Historical Average An average for an account over a number of historical periods.

holding company An entity that is part of a legal entity group, with direct or indirect investments in all entities in the group.

horizontal application server cluster A cluster with application server instances on different machines.

host A server on which applications and services are installed.

host properties Properties pertaining to a host, or if the host has multiple Oracle EPM homes, to an Oracle EPM home.

Hybrid Analysis An analysis mapping low-level data stored in a relational database to summary-level data stored in Essbase, combining the mass scalability of relational systems with multidimensional data.

hyperlink A link to a file, a Web page, or an intranet HTML page.

Hypertext Markup Language (HTML) A programming language specifying how Web browsers display data.

identity A unique identification for a user or group in external authentication.

image bookmarks Graphic links to Web pages or repository items.

IMPACTED status A status that indicates changes in child entities consolidating into parent entities.

implied share A member with one or more children but only one that is consolidated, so the parent and child share a value.

import format In FDM, the definition of the structure of the source file that enables the loading of a source data file to an FDM data-load location.

inactive group A group for which an administrator has deactivated system access.

INACTIVE status A status that indicates entities deactivated from consolidation for the current period.

inactive user A user whose account was deactivated by an administrator.

income account An account storing periodic and year-to-date values that, if positive, increase net worth.

index (1) A method where Essbase uses sparse-data combinations to retrieve data in block storage databases. (2) The index file.

index cache A buffer containing index pages.

index entry A pointer to an intersection of sparse dimensions. Index entries point to data blocks on disk and use offsets to locate cells.

index file An Essbase file storing block storage data retrieval information, residing on disk, and containing index pages.

index page A subdivision in an index file. An index page contains pointers to data blocks.

input data Data loaded from a source rather than calculated.

installation assemblies Product installation files that plug in to EPM System Installer.

integration A process that is run to move data between Oracle's Hyperion applications using Shared Services. Data integration definitions specify the data moving between a source application and a destination application, and they enable the data movements to be grouped, ordered, and scheduled.

intelligent calculation A calculation method tracking updated data blocks since the last calculation.

Interactive Reporting connection file (.oce) Files encapsulating database connection information, including the database API (ODBC, SQL*Net, and so on), database software, the database server network address, and database user name. Administrators create and publish Interactive Reporting connection (.oce) files.

intercompany elimination See elimination.

intercompany matching The process of comparing balances for pairs of intercompany accounts within an application. Intercompany receivables are compared to intercompany payables for matches. Matching accounts are used to eliminate intercompany transactions from an organization's consolidated totals.

intercompany matching report A report that compares intercompany account balances and indicates whether the accounts are in balance.

interdimensional irrelevance A situation in which a dimension does not intersect with other dimensions. Because the data in the dimension cannot be accessed from the nonintersecting dimensions, the nonintersecting dimensions are not relevant to that dimension.

intersection A unit of data representing the intersection of dimensions in a multidimensional database; also, a worksheet cell.

intragage assignment An assignment in the financial flow to an object within the same stage.

introspection A deep inspection of a data source to discover hierarchies based on the inherent relationships in the database. Contrast with scraping.

Investigation See drill-through.

isolation level An Essbase Kernel setting that determines the lock and commit behavior of database operations. Choices are: committed access and uncommitted access.

iteration A pass of the budget or planning cycle in which the same version of data is revised and promoted.

Java application server cluster An active-active application server cluster of Java Virtual Machines (JVMs).

Java Database Connectivity (JDBC) A client-server communication protocol used by Java-based clients and relational databases. The JDBC interface provides a call-level API for SQL-based database access.

job output Files or reports produced from running a job.

jobs Documents with special properties that can be launched to generate output. A job can contain Interactive Reporting, SQR Production Reporting, or generic documents.

join A link between two relational database tables or topics based on common content in a column or row. A join typically occurs between identical or similar items within different tables or topics. For example, a record in the Customer table is joined to a record in the Orders table because the Customer ID value is the same in each table.

journal entry (JE) A set of debit-credit adjustments to account balances for a scenario and period.

JSP Java Server Page.

KeyContacts gadget A gadget that contains a group of Smart Space users and provides access to Smart Space Collaborator. For example, you can have a KeyContacts gadget for your marketing team and another for your development team. See also gadget.

latest A spreadsheet keyword used to extract data values from the member defined as the latest time period.

layer (1) The horizontal location of members in a hierarchical structure, specified by generation (top down) or level (bottom up). (2) Position of objects relative to other objects. For example, in the Sample Basic database, Qtr1 and Qtr4 are in the same layer, so they are also in the same generation, but in a database with a ragged hierarchy, Qtr1 and Qtr4 might not be in same layer, though they are in the same generation.

layout area An area on a Workspace Page where content can be placed.

legend box A box containing labels that identify the data categories of a dimension.

level A layer in a hierarchical tree structure that defines database member relationships. Levels are ordered from the bottom dimension member (level 0) up to the parent members.

level 0 block A data block for combinations of sparse, level 0 members.

level 0 member A member that has no children.

liability account An account type that stores "point in time" balances of a company's liabilities. Examples: accrued expenses, accounts payable, and long-term debt.

lifecycle management The process of migrating an application, a repository, or individual artifacts across product environments.

line item detail The lowest level of detail in an account.

lineage The relationship between different metadata elements showing how one metadata element is derived from one or more other metadata elements, ultimately tracing the metadata element to its physical source. In Essbase Studio, a lineage viewer displays the relationships graphically. See also traceability.

link (1) A reference to a repository object. Links can reference folders, files, shortcuts, and other links. (2) In a taskflow, the point where the activity in one stage ends and another begins.

link condition A logical expression evaluated by the taskflow engine to determine the sequence of launching taskflow stages.

linked data model Documents that are linked to a master copy in a repository

linked partition A shared partition that enables you to use a data cell to link two databases. When a user clicks a linked cell in a worksheet, Essbase opens a new sheet displaying the dimensions in the linked database. The user can then drill down those dimensions.

linked reporting object (LRO) A cell-based link to an external file such as cell notes, URLs, or files with text, audio, video, or pictures. (Only cell notes are supported for Essbase LROs in Financial Reporting.) Contrast with local report object.

load balancer Hardware or software that directs the requests to individual application servers in a cluster and is the only point of entry into the system.

load balancing Distribution of requests across a group of servers, which helps to ensure optimal end user performance.

local currency An input currency type. When an input currency type is not specified, the local currency matches the entity's base currency.

local report object A report object that is not linked to a Financial Reporting report object in Explorer. Contrast with linked reporting object.

local results A data model's query results. Results can be used in local joins by dragging them into the data model. Local results are displayed in the catalog when requested.

locale A computer setting that specifies a location's language, currency and date formatting, data sort order, and the character set encoding used on the computer. Essbase uses only the encoding portion. See also encoding, ESSLANG.

locale header record A text record at the beginning of some non-Unicode-encoded text files, such as scripts, that identifies the encoding locale.

location alias A descriptor that identifies a data source. The location alias specifies a server, application, database, user name, and password. Location aliases are set by DBAs at the database level using Administration Services Console, ESSCMD, or the API.

locked A user-invoked process that prevents users and processes from modifying data.

locked data model A data model that cannot be modified by a user.

LOCKED status A consolidation status indicating that an entity contains data that cannot be modified.

Log Analyzer An Administration Services feature that enables filtering, searching, and analysis of Essbase logs.

logic group In FDM, one or more logic accounts generated after a source file is loaded into FDM. Logic accounts are calculated accounts derived from the source data.

logical Web application An aliased reference used to identify the internal host name, port, and context of a Web application. In a clustered or high-availability environment, this is the alias name that establishes a single internal reference for the distributed components. In EPM System, a nonclustered logical Web application defaults to the physical host running the Web application.

LRO See linked reporting object.

managed server An application server process running in its own Java Virtual Machine (JVM).

manual stage A stage that requires human intervention.

Map File A file that stores the definition for sending data to or retrieving data from an external database. Map files have different extensions (.mps to send data; .mpr to retrieve data).

Map Navigator A feature that displays your current position on a Strategy, Accountability, or Cause and Effect map, indicated by a red outline.

Marginal Tax Rate The rate used to calculate the after-tax cost of debt; represents the tax rate applied to the last earned income dollar (the rate from the highest tax bracket into which income falls) and includes federal, state, and local taxes. Based on current level of taxable income and tax bracket, you can predict marginal tax rate.

Market Risk Premium The additional rate of return paid over the risk-free rate to persuade investors to hold "riskier" investments than government securities. Calculated by subtracting the risk-free rate from the expected market return. These figures should closely model future market conditions.

master data model An independent data model that is referenced as a source by multiple queries. When used, "Locked Data Model" is displayed in the Query section's Content pane; the data model is linked to the master data model displayed in the Data Model section, which an administrator may hide.

mathematical operator A symbol that defines how data is calculated in formulas and outlines. Can be any of the standard mathematical or Boolean operators; for example, +, -, *, /, and %.

MaxL The multidimensional database access language for Essbase, consisting of a data definition language (MaxL DDL) and a data manipulation language (MaxL DML). See also MaxL DDL, MaxL DML, and MaxL Shell

MaxL DDL The data definition language used by Essbase for batch or interactive system-administration tasks.

MaxL DML The data manipulation language used in Essbase for data query and extraction.

MaxL Perl Module A Perl module (essbase.pm) that is part of Essbase MaxL DDL. This module can be added to the Perl package to provide access to Essbase databases from Perl programs.

MaxL Script Editor A script-development environment in Administration Services Console. MaxL Script Editor is an alternative to using a text editor and the MaxL Shell for administering Essbase with MaxL scripts.

MaxL Shell An interface for passing MaxL statements to Essbase Server. The MaxL Shell executable file is located in the Essbase bin directory (UNIX: essmsh; Windows: essmsh.exe).

MDX (multidimensional expression) A language used for querying and calculation in multidimensional-compliant databases.

measures Numeric values in an OLAP database cube that are available for analysis. Measures are margin, cost of goods sold, unit sales, budget amount, and so on. See also fact table.

member A discrete component within a dimension. A member identifies and differentiates the organization of similar units. For example, a time dimension might include members Jan, Feb, and Qtr1.

member list A named system- or user-defined group that references members, functions, or member lists within a dimension.

member load In Essbase Integration Services, the process of adding dimensions and members (without data) to Essbase outlines.

member selection report command A type of Report Writer command that selects member ranges based on outline relationships, such as sibling, generation, and level.

member-specific report command A type of Report Writer formatting command that is executed as it is encountered in a report script. The command affects only its associated member and executes the format command before processing the member.

merge A data load option that clears values only from the accounts specified in the data load file and replaces them with values in the data load file.

metadata A set of data that defines and describes the properties and attributes of the data stored in a database or used by an application. Examples of metadata are dimension names, member names, properties, time periods, and security.

metadata elements Metadata derived from data sources and other metadata that is stored and cataloged for Essbase Studio use.

metadata sampling The process of retrieving a sample of members in a dimension in a drill-down operation.

metadata security Security set at the member level to restrict users from accessing certain outline members.

metaoutline In Essbase Integration Services, a template containing the structure and rules for creating an Essbase outline from an OLAP model.

Middleware home A directory that includes the Oracle WebLogic Server home and can also include the EPM Oracle home and other Oracle homes. A Middleware home can reside on a local file system or on a remote shared disk that is accessible through NFS.

migration audit report A report generated from the migration log that provides tracking information for an application migration.

migration definition file (.mdf) A file that contains migration parameters for an application migration, enabling batch script processing.

migration log A log file that captures all application migration actions and messages.

migration snapshot A snapshot of an application migration that is captured in the migration log.

MIME Type An attribute that describes the data format of an item, so that the system knows which application should open the object. A file's MIME (Multipurpose Internet Mail Extension) type is determined by the file extension or HTTP header. Plug-ins tell browsers which MIME types they support and which file extensions correspond to each MIME type.

mining attribute In data mining, a class of values used as a factor in analysis of a set of data.

minireport A report component that includes layout, content, hyperlinks, and the query or queries to load the report. Each report can include one or more minireports.

minischema A graphical representation of a subset of tables from a data source that represents a data modeling context.

missing data (#MISSING) A marker indicating that data in the labeled location does not exist, contains no value, or was never entered or loaded. For example, missing data exists when an account contains data for a previous or future period but not for the current period.

model 1) In data mining, a collection of an algorithm's findings about examined data. A model can be applied against a wider data set to generate useful information about that data. 2) A file or content string containing an application-specific representation of data. Models are the basic data managed by Shared Services, of two major types: dimensional and nondimensional application objects. 3) In Business Modeling, a network of boxes connected to represent and calculate the operational and financial flow through the area being examined.

multidimensional database A method of organizing, storing, and referencing data through three or more dimensions. An individual value is the intersection point for a set of dimensions. Contrast with relational database.

Multiload An FDM feature that allows the simultaneous loading of multiple periods, categories, and locations.

My Workspace Page Customizable Workspace Pages created by users. They are marked specially so that they can be easily accessed from one single place without having to navigate the repository.

named set In MaxL DML, a set with its logic defined in the optional WITH section of a MaxL DML query. The named set can be referenced multiple times in the query.

native authentication The process of authenticating a user name and password from within the server or application.

nested column headings A report column heading format that displays data from multiple dimensions. For example, a column heading that contains Year and Scenario members is a nested column. The nested column heading shows Q1 (from the Year dimension) in the top line of the heading, qualified by Actual and Budget (from the Scenario dimension) in the bottom line of the heading.

NO DATA status A consolidation status indicating that this entity contains no data for the specified period and account.

non-dimensional model A Shared Services model type that includes application objects such as security files, member lists, calculation scripts, and Web forms.

non-unique member name See duplicate member name.

null value A value that is absent of data. Null values are not equal to zero.

numeric attribute range A feature used to associate a base dimension member that has a discrete numeric value with an attribute that represents a value range. For example, to classify customers by age, an Age Group attribute dimension can contain members for the following age ranges: 0-20, 21-40, 41-60, and 61-80. Each Customer dimension member can be associated with an Age Group range. Data can be retrieved based on the age ranges rather than on individual age values.

ODBC Open Database Connectivity. A database access method used from any application regardless of how the database management system (DBMS) processes the information.

OK status A consolidation status indicating that an entity has already been consolidated, and that data has not changed below it in the organization structure.

OLAP Metadata Catalog In Essbase Integration Services, a relational database containing metadata describing the nature, source, location, and type of data that is pulled from the relational data source.

OLAP model In Essbase Integration Services, a logical model (star schema) that is created from tables and columns in a relational database. The OLAP model is then used to generate the structure of a multidimensional database. See also online analytical processing (OLAP).

online analytical processing (OLAP) A multidimensional, multiuser, client-server computing environment for users who analyze consolidated enterprise data in real time. OLAP systems feature drill-down, data pivoting, complex calculations, trend analysis, and modeling.

Open Database Connectivity (ODBC) Standardized application programming interface (API) technology that allows applications to access multiple third-party databases.

Oracle home A directory containing the installed files required by a specific product, and residing within the directory structure of Middleware home. See also Middleware home.

organization An entity hierarchy that defines each entity and their relationship to others in the hierarchy.

origin The intersection of two axes.

outline The database structure of a multidimensional database, including all dimensions, members, tags, types, consolidations, and mathematical relationships. Data is stored in the database according to the structure defined in the outline.

outline synchronization For partitioned databases, the process of propagating outline changes from one database to another database.

P&L accounts (P&L) Profit and loss accounts. P&L refers to a typical grouping of expense and income accounts that comprise a company's income statement.

page A display of information in a grid or table often represented by the Z-axis. A page can contain data from one field, derived data from a calculation, or text.

page file An Essbase data file.

page heading A report heading type that lists members represented on the current page of the report. All data values on the page have the members in the page heading as a common attribute.

page member A member that determines the page axis.

palette A JASC-compliant file with a .PAL extension. Each palette contains 16 colors that complement each other and can be used to set the dashboard color elements.

parallel calculation A calculation option. Essbase divides a calculation into tasks and calculates some tasks simultaneously.

parallel data load In Essbase, the concurrent execution of data load stages by multiple process threads.

parallel export The ability to export Essbase data to multiple files. This may be faster than exporting to a single file, and it may resolve problems caused by a single data file becoming too large for the operating system to handle.

parent adjustments The journal entries that are posted to a child in relation to its parent.

parents The entities that contain one or more dependent entities that report directly to them. Because parents are entities associated with at least one node, they have entity, node, and parent information associated with them.

partition area A subcube within a database. A partition is composed of one or more areas of cells from a portion of the database. For replicated and transparent partitions, the number of cells within an area must be the same for the data source and target to ensure that the two partitions have the same shape. If the data source area contains 18 cells, the data target area must also contain 18 cells to accommodate the number of values.

partitioning The process of defining areas of data that are shared or linked between data models. Partitioning can affect the performance and scalability of Essbase applications.

pattern matching The ability to match a value with any or all characters of an item entered as a criterion. Missing characters may be represented by wild-card values such as a question mark (?) or an asterisk (*). For example, "Find all instances of apple" returns apple, but "Find all instances of apple*" returns apple, applesauce, applecranberry, and so on.

percent consolidation The portion of a child's values that is consolidated to its parent.

percent control The extent to which an entity is controlled within the context of its group.

percent ownership The extent to which an entity is owned by its parent.

performance indicator An image file used to represent measure and scorecard performance based on a range you specify; also called a status symbol. You can use the default performance indicators or create an unlimited number of your own.

periodic value method (PVA) A process of currency conversion that applies the periodic exchange rate values over time to derive converted results.

permission A level of access granted to users and groups for managing data or other users and groups.

persistence The continuance or longevity of effect for any Essbase operation or setting. For example, an Essbase administrator may limit the persistence of user name and password validity.

personal pages A personal window to repository information. You select what information to display and its layout and colors.

personal recurring time events Reusable time events that are accessible only to the user who created them.

personal variable A named selection statement of complex member selections.

perspective A category used to group measures on a scorecard or strategic objectives within an application. A perspective can represent a key stakeholder (such as a customer, employee, or shareholder/financial) or a key competency area (such as time, cost, or quality).

pinboard One of the three data object display types. Pinboards are graphics composed of backgrounds and interactive icons called pins. Pinboards require traffic lighting definitions.

pins Interactive icons placed on graphic reports called pinboards. Pins are dynamic. They can change images and traffic lighting color based on the underlying data values and analysis tools criteria.

pivot Alter the perspective of retrieved data. When Essbase first retrieves a dimension, it expands data into rows. You can then pivot or rearrange the data to obtain a different viewpoint.

planner A user who can input and submit data, use reports that others create, execute business rules, use task lists, enable e-mail notification for themselves, and use Smart View. Planners comprise the majority of users.

planning unit A data slice at the intersection of a scenario, version, and entity; the basic unit for preparing, reviewing, annotating, and approving plan data.

plot area The area bounded by X, Y, and Z axes; for pie charts, the rectangular area surrounding the pie.

plug account An account in which the system stores any out-of-balance differences between intercompany account pairs during the elimination process.

post stage assignment Assignments in the allocation model that are assigned to locations in a subsequent model stage.

POV (point of view) A feature for setting data focus by selecting members that are not already assigned to row, column, or page axes. For example, selectable POVs in FDM could include location, period, category, and target category. In another example, using POV as a filter in Smart View, you could assign the Currency dimension to the POV and select the Euro member. Selecting this POV in data forms displays data in Euro values.

precalculation Calculating the database before user retrieval.

precision Number of decimal places displayed in numbers.

predefined drill paths Paths used to drill to the next level of detail, as defined in the data model.

presentation A playlist of Web Analysis documents, enabling reports to be grouped, organized, ordered, distributed, and reviewed. Includes pointers referencing reports in the repository.

preserve formulas User-created formulas kept within a worksheet while retrieving data.

primary measure A high-priority measure important to your company and business needs. Displayed in the Contents frame.

Process Monitor Report A list of locations and their positions within the FDM data conversion process. You can use the process monitor report to monitor the status of the closing process. The report is time-stamped. Therefore, it can be used to determine to which locations at which time data was loaded.

product In Shared Services, an application type, such as Planning or Performance Scorecard.

Production Reporting See SQR Production Reporting.

project An instance of Oracle's Hyperion products grouped together in an implementation. For example, a Planning project may consist of a Planning application, an Essbase cube, and a Financial Reporting Server instance.

provisioning The process of granting users and groups specific access permissions to resources.

proxy server A server acting as an intermediary between workstation users and the Internet to ensure security.

public job parameters Reusable named job parameters created by administrators and accessible to users with requisite access privileges.

public recurring time events Reusable time events created by administrators and accessible through the access control system.

PVA See periodic value method.

qualified name A member name in a qualified format that differentiates duplicate member names in a duplicate member outline. For example, [Market].[East].[State].[New York] or [Market].[East].[City].[New York].

query governor An Essbase Integration Server parameter or Essbase Server configuration setting that controls the duration and size of queries made to data sources.

reciprocal assignment An assignment in the financial flow that also has the source as one of its destinations.

reconfigure URL A URL that is used to reload servlet configuration settings dynamically when users are already logged on to the Workspace.

record In a database, a group of fields making up one complete entry. For example, a customer record may contain fields for name, address, telephone number, and sales data.

recurring template A journal template for making identical adjustments in every period.

recurring time event An event specifying a starting point and the frequency for running a job.

redundant data Duplicate data blocks that Essbase retains during transactions until Essbase commits updated blocks.

regular journal A feature for entering one-time adjustments for a period. A regular journal can be balanced, balanced by entity, or unbalanced.

Related Accounts Accounts related to the main account and grouped under the same main account number. The account structure groups all main and related accounts under the same main account number. The main account is distinguished from related accounts by the first suffix of the account number.

relational database A type of database that stores data in related two-dimensional tables. Contrast with multidimensional database.

replace A data load option that clears existing values from all accounts for periods specified in the data load file and loads values from the data load file. If an account is not specified in the load file, its values for the specified periods are cleared.

replicated partition A portion of a database, defined through Partition Manager, used to propagate an update to data mastered at one site to a copy of data stored at another site. Users can access the data as though it were part of their local database.

Report Extractor An Essbase component that retrieves report data from the Essbase database when report scripts are run.

report object In report designs, a basic element with properties defining behavior or appearance, such as text boxes, grids, images, and charts.

report script A text file containing Essbase Report Writer commands that generate one or more production reports.

Report Viewer An Essbase component that displays complete reports after report scripts are run.

reporting currency The currency used to prepare financial statements, and converted from local currencies to reporting currencies.

repository Storage location for metadata, formatting, and annotation information for views and queries.

resources Objects or services managed by the system, such as roles, users, groups, files, and jobs.

restore An operation to reload data and structural information after a database has been damaged or destroyed, typically performed after shutting down and restarting the database.

restructure An operation to regenerate or rebuild the database index and, in some cases, data files.

result frequency The algorithm used to create a set of dates to collect and display results.

review level A Process Management review status indicator representing the process unit level, such as Not Started, First Pass, Submitted, Approved, and Published.

Risk Free Rate The rate of return expected from "safer" investments such as long-term U.S. government securities.

role The means by which access permissions are granted to users and groups for resources.

roll-up See consolidation.

root member The highest member in a dimension branch.

runtime prompt A variable that users enter or select before a business rule is run.

sampling The process of selecting a representative portion of an entity to determine the entity's characteristics. See also metadata sampling.

saved assumptions User-defined Planning assumptions that drive key business calculations (for example, the cost per square foot of office floor space).

scaling Scaling determines the display of values in whole numbers, tens, hundreds, thousands, millions, and so on.

scenario A dimension for classifying data; for example, Actuals, Budget, Forecast1, or Forecast2.

schema In relational databases, a logical model that represents the data and the relationships between the data.

scope The area of data encompassed by any Essbase operation or setting; for example, the area of data affected by a security setting. Most commonly, scope refers to three levels of granularity, where higher levels encompass lower levels. The levels, from highest to lowest: the entire system (Essbase Server), applications on Essbase Server, or databases within Essbase Server applications. See also persistence.

score The level at which targets are achieved, usually expressed as a percentage of the target.

scorecard A business object that represents the progress of an employee, strategy element, or accountability element toward goals. Scorecards ascertain this progress based on data collected for each measure and child scorecard added to the scorecard.

scrapping An inspection of a data source to derive the most basic metadata elements from it. Contrast with introspection.

secondary measure A low-priority measure, less important than primary measures. Secondary measures do not have Performance reports but can be used on scorecards and to create dimension measure templates.

security agent A Web access management provider (for example, Oracle Access Manager, Oracle Single Sign-On, or CA SiteMinder) that protects corporate Web resources.

security platform A framework enabling Oracle EPM System products to use external authentication and single sign-on.

serial calculation The default calculation setting. Divides a calculation pass into tasks and calculates one task at a time.

services Resources that enable business items to be retrieved, changed, added, or deleted. Examples: Authorization and Authentication.

servlet A piece of compiled code executable by a Web server.

shared disks See shared storage.

shared member A member that shares storage space with another member of the same name, preventing duplicate calculation of members that occur multiple times in an Essbase outline.

Shared Services Registry The part of the Shared Services repository that manages EPM System deployment information for most EPM System products, including installation directories, database settings, computer names, ports, servers, URLs, and dependent service data.

shared storage A set of disks containing data that must be available to all nodes of a failover cluster; also called shared disks.

Shared Workspace Pages Workspace Pages shared across an organization that are stored in a special System folder and can be accessed by authorized users from the Shared Workspace Pages Navigate menu.

sibling A child member at the same generation as another child member and having the same immediate parent. For example, the members Florida and New York are children of East and each other's siblings.

silent response files Files providing data that an installation administrator would otherwise be required to provide. Response files enable EPM System Installer or EPM System Configurator to run without user intervention or input.

single point of failure Any component in a system that, if it fails, prevents users from accessing the normal functionality.

single sign-on (SSO) The ability to log on once and then access multiple applications without being prompted again for authentication.

smart tags Keywords in Microsoft Office applications that are associated with predefined actions available from the Smart Tag menu. In Oracle EPM System products, smart tags can also be used to import Reporting and Analysis content and to access Financial Management and Essbase functions.

SmartCut A link to a repository item, in URL form.

snapshot Read-only data from a specific time.

source currency The currency from which values originate and are converted through exchange rates to the destination currency.

sparse dimension In block storage databases, a dimension unlikely to contain data for all member combinations when compared to other dimensions. Contrast with dense dimension. For example, not all customers have data for all products.

SPF files Printer-independent files created by an SQR Production Reporting server, containing a representation of the actual formatted report output, including fonts, spacing, headers, footers, and so on.

Spotlighter A tool that enables color coding based on selected conditions.

SQL spreadsheet A data object that displays the result set of a SQL query.

SQR Production Reporting A specialized programming language for data access, data manipulation, and creating SQR Production Reporting documents.

stage 1) A task description that forms one logical step within a taskflow, usually performed by an individual. A stage can be manual or automated. 2) For Profitability, logical divisions within the model that represent the steps in the allocation process within your organization.

stage action For automated stages, the invoked action that executes the stage.

staging area A database that you create to meet the needs of a specific application. A staging area is a snapshot or restructured version of one or more RDBMS.

staging table A database that you create to meet the needs of a specific application. A staging area is a snapshot or restructured version of one or more RDBMSs.

standard dimension A dimension that is not an attribute dimension.

standard journal template A journal function used to post adjustments that have common adjustment information for each period. For example, you can create a standard template that contains the common account IDs, entity IDs, or amounts, and then use the template as the basis for many regular journals.

Status bar The bar at the bottom of the screen that displays helpful information about commands, accounts, and the current status of your data file.

stored hierarchy In aggregate storage databases outlines only, a hierarchy in which the members are aggregated according to the outline structure. Stored hierarchy members have certain restrictions; for example, they cannot contain formulas.

strategic objective (SO) A long-term goal defined by measurable results. Each strategic objective is associated with one perspective in the application, has one parent, the entity, and is a parent to critical success factors or other strategic objectives.

Strategy map Represents how the organization implements high-level mission and vision statements into lower-level, constituent strategic goals and objectives.

structure view Displays a topic as a simple list of component data items.

Structured Query Language A language used to process instructions to relational databases.

Subaccount Numbering A system for numbering subaccounts using nonsequential whole numbers.

subscribe Flags an item or folder to receive automatic notification whenever the item or folder is updated.

Summary chart In the Investigates Section, a chart that rolls up detail charts shown below in the same column, plotting metrics at the summary level at the top of each chart column.

supervisor A user with full access to all applications, databases, related files, and security mechanisms for a server.

supporting detail Calculations and assumptions from which the values of cells are derived.

suppress rows A setting that excludes rows containing missing values and underscores characters from spreadsheet reports.

symmetric multiprocessing (SMP) A server architecture that enables multiprocessing and multithreading. Performance is not significantly degraded when a large number of users simultaneously connect to an single instance.

sync Synchronization of Shared Services and application models.

synchronized The condition that exists when the latest version of a model resides in both the application and in Shared Services. See also model.

system extract A feature that transfers data from application metadata into an ASCII file.

tabs Navigable views of accounts and reports in Strategic Finance.

target Expected results of a measure for a specified period of time (day, quarter, and so on).

task list A detailed status list of tasks for a particular user.

taskflow The automation of a business process in which tasks are passed from one taskflow participant to another according to procedural rules.

taskflow definition Business processes in the taskflow management system that consist of a network of stages and their relationships; criteria indicating the start and end of the taskflow; and information about individual stages, such as participants, associated applications, associated activities, and so on.

taskflow instance A single instance of a taskflow including its state and associated data.

taskflow management system A system that defines, creates, and manages the execution of a taskflow, including definitions, user or application interactions, and application executables.

taskflow participant The resource that performs the task associated with the taskflow stage instance for both manual and automated stages.

Taxes - Initial Balances Strategic Finance assumes that the Initial Loss Balance, Initial Gain Balance, and Initial Balance of Taxes Paid entries have taken place in the period before the first Strategic Finance time period.

TCP/IP See Transmission Control Protocol/Internet Protocol.

text measure In Essbase, a member tagged as Text in the dimension where measures are represented. The cell values are displayed as predefined text. For example, the text measure Satisfaction Index may have the values Low, Medium, and High. See also typed measure, text list, derived text measure.

time dimension The time period that the data represents, such as fiscal or calendar periods.

time events Triggers for job execution.

time scale A scale that displays metrics by a specific time span, such as monthly or quarterly.

time series reporting A process for reporting data based on a calendar date (for example, year, quarter, month, or week).

Timeline Viewer An FDM feature that enables users to view dates and times of completed process flow steps for specific locations.

Title bar A bar that displays the Strategic Finance name, the file name, and the scenario name Version box.

toast message A message that fades in the lower-right corner of the screen.

token An encrypted identification of one valid user or group on an external authentication system.

top and side labels Column and row headings on the top and sides of a Pivot report.

top-level member A dimension member at the top of the tree in a dimension outline hierarchy, or the first member of the dimension in sort order if there is no hierarchical relationship among dimension members. If a hierarchical relationship exists, the top-level member name is generally the same as the dimension name.

trace allocations A Profitability feature that enables you to visually follow the flow of financial data, either forwards or backwards, from a single intersection throughout the model.

trace level The level of detail captured in a log file.

traceability The ability to track a metadata element to its physical source. For example, in Essbase Studio, a cube schema can be traced from its hierarchies and measure hierarchies to its dimension elements, date/time elements, measures, and, ultimately, to its physical source elements. See also lineage.

traffic lighting Color-coding of report cells, or pins based on a comparison of two dimension members, or on fixed limits.

transformation 1) A process that transforms artifacts so that they function properly in the destination environment after application migration. 2) In data mining, the modification of data (bidirectionally) flowing between the cells in the cube and the algorithm.

translation See currency conversion.

Transmission Control Protocol/Internet Protocol (TCP/IP) A standard set of communication protocols linking computers with different operating systems and internal architectures. TCP/IP utilities are used to exchange files, send mail, and store data to various computers that are connected to local and wide area networks.

transparent login A process that logs in authenticated users without launching the login screen.

transparent partition A shared partition that enables users to access and change data in a remote database as though it is part of a local database.

triangulation A means of converting balances from one currency to another through a third common currency. In Europe, this currency is the euro for member countries. For example, to convert from the French franc to the Italian lira, the common currency is defined as the European euro. Therefore, to convert balances from the French franc to the Italian lira, balances are converted from the French franc to the European euro and from the European euro to Italian lira.

triggers An Essbase feature whereby data is monitored according to user-specified criteria that, when met, cause Essbase to alert the user or system administrator.

trusted user Authenticated user.

tuple MDX syntax element that references a cell as an intersection of a member from each dimension. If a dimension is omitted, its top member is implied. Examples: (Jan); (Jan, Sales); ([Jan], [Sales], [Cola], [Texas], [Actual]).

two-pass An Essbase property that is used to recalculate members that are dependent on the calculated values of other members. Two-pass members are calculated during a second pass through the outline.

unary operator A mathematical indicator (+, -, *, /, %) associated with an outline member. The unary operator defines how the member is calculated during a database roll-up.

Unicode-mode application An Essbase application wherein character text is encoded in UTF-8, enabling users with computers set up for different languages to share application data.

unique member name A nonshared member name that exists only once in a database outline.

unique member outline A database outline that is not enabled for duplicate member names.

upgrade The process of replacing a software release with a newer release. The term upgrade does not apply to installing a maintenance release. See also maintenance release, migration.

upper-level block A type of data block wherein at least one of the sparse members is a parent-level member.

user directory A centralized location for user and group information, also known as a repository or provider. Popular user directories include Oracle Internet Directory (OID), Microsoft Active Directory (MSAD), and Sun Java System Directory Server.

user variable A variable that dynamically renders data forms based on a user's member selection, displaying only the specified entity. For example, a user variable named Department displays specific departments and employees.

user-defined attribute (UDA) An attribute, associated with members of an outline to describe a characteristic of the members, that can be used to return lists of members that have the specified associated UDA.

user-defined member list A named, static set of members within a dimension defined by the user.

validation The process of checking a business rule, report script, or partition definition against the outline to ensure that the object being checked is valid.

validation rules Rules used in FDM to enforce data integrity. For example, in FDM, validation rules ensure that certain conditions are met after data is loaded from FDM to the target application.

value dimension A dimension that is used to define input value, translated value, and consolidation detail.

variance The difference between two values (for example, between planned and actual values).

version A possible outcome used within the context of a scenario of data. For example, Budget - Best Case and Budget - Worst Case where Budget is scenario and Best Case and Worst Case are versions.

vertical application server cluster A cluster with multiple application server instances on the same machine.

view A year-to-date or periodic display of data.

visual cue A formatted style, such as a font or a color, that highlights specific data value types. Data values may be dimension members; parent, child, or shared members; dynamic calculations; members containing a formula; read-only data cells; read-and-write data cells; or linked objects.

WebLogic Server home A subdirectory of Middleware home containing installed files required by a WebLogic Server instance. WebLogic Server home is a peer of Oracle homes.

weight A value assigned to an item on a scorecard that indicates the relative importance of that item in the calculation of the overall scorecard score. The weighting of all items on a scorecard accumulates to 100%. For example, to recognize the importance of developing new features for a product, the measure for New Features Coded on a developer's scorecard would be assigned a higher weighting than a measure for Number of Minor Defect Fixes.

wild card Character that represents any single character (?) or group of characters (*) in a search string.

WITH section In MaxL DML, an optional section of the query used for creating reusable logic to define sets or members. Sets or custom members can be defined once in the WITH section and then referenced multiple times during a query.

workbook An entire spreadsheet file with many worksheets.

workflow The steps required to process data from start to finish in FDM. The workflow consists of Import (loading data from the GL file), Validate (ensures that all members are mapped to a valid account), Export (loads the mapped members to the target application), and Check (verifies accuracy of data by processing data with user-defined validation rules).

Workspace Page A page created with content from multiple sources including documents, URL, and other content types. Enables a user to aggregate content from Oracle and non-Oracle sources.

write-back The ability for a retrieval client, such as a spreadsheet, to update a database value.

ws.conf A configuration file for Windows platforms.

wscnf_platform A configuration file for UNIX platforms.

XML See Extensible Markup Language.

XOLAP An Essbase multidimensional database that stores only the outline metadata and retrieves all data from a relational database at query time. XOLAP supports aggregate storage databases and applications that contain duplicate member names.

Y axis scale A range of values on Y axis of charts displayed in Investigate Section. For example, use a unique Y axis scale for each chart, the same Y axis scale for all Detail charts, or the same Y axis scale for all charts in the column. Often, using a common Y axis improves your ability to compare charts at a glance.

Zero Administration A software tool that identifies version number of the most up-to-date plug-in on the server.

ZoomChart A tool for viewing detailed information by enlarging a chart. A ZoomChart enables you to see detailed numeric information on the metric that is displayed in the chart.

Index

A

- active preferences
 - controls, [256](#)
 - setting, [256](#)
- adding
 - custom document components, [217](#)
 - pins, [189](#)
- advanced member selection
 - defining subset member selections, [66](#), [69](#)
 - Financial Management, [169](#)
 - overview, [61](#)
 - searching for members, [63](#)
- alias tables, [263](#)
- analysis tools
 - definitions
 - default, [114](#)
 - disabling, [115](#)
 - enabling, [115](#)
 - ordering, [114](#)
 - overview, [113](#)
 - Restrict Data, [122](#)
 - Retrieve Only Top/Bottom, [124](#)
 - Sorting, [121](#)
 - Traffic Lighting, [118](#)
- Analysis Tools Manager toolbar, [113](#)
- arranging dimensions in the layout, [56](#)
- asymmetrical analysis, [115](#)
- Average calculation, [127](#)

B

- background color, setting, [220](#)
- background images for pinboards, [186](#)
- background objects, [236](#)
- Browser, Dimension, [59](#)

C

- calculations

- Average, [127](#)
- creating, [133](#)
- Cumulative, [127](#)
- Difference from Average, [127](#)
- Divide, [128](#)
- Linear Regression, [128](#)
- Maximum, [128](#)
- Maximum Value, [128](#)
- Minimum, [129](#)
- Minimum Value, [129](#)
- modifying, [137](#)
- Multiply, [129](#)
- overview, [126](#)
- Percent, [129](#)
- Percent Difference from Average, [130](#)
- Percent of Difference, [130](#)
- Percent of Member, [130](#)
- Percent of Total, [130](#)
- Rank Ascending, [131](#)
- Rank Descending, [131](#)
- Subtract, [131](#)
- Sum, [131](#)
- Trend, [132](#)
- Variance, [132](#)
- Variance Percent, [132](#)
- cells, formatting, [99](#)
- Chart Properties panel
 - Axes tab, [105](#)
 - Bubble tab, [108](#)
 - General tab, [104](#)
 - Pie tab, [108](#)
 - Series tab, [107](#)
 - Titles tab, [105](#)
- chart properties, overview, [103](#)
- Chart User Preferences panel
 - Axes tab, [105](#)
 - Bubble tab, [108](#)
 - General tab, [104](#)

- Pie tab, [108](#)
- Series tab, [107](#)
- Titles tab, [105](#)
- charts
 - overview, [102](#)
 - previewing, [109](#)
- Check Box object, [237](#)
- clipboard, exporting to, [144](#)
- colors
 - background, setting, [220](#)
 - hiding by color, [115](#)
 - selecting, [110](#)
- columns
 - fitting header labels in, [100](#)
 - selecting for SQL queries, [200](#)
 - sizing
 - overview, [100](#)
 - resetting default widths, [100](#)
- commands
 - Redo, [89](#)
 - Undo, [89](#)
- components, selecting current, [217](#)
- composing a SQL query, [198](#)
- Configuration Test Servlet, [270](#)
- configuring
 - JDBC drivers, [177](#)
- connectivity issues, diagnosing and resolving, [270](#)
- content, retrieving from other applications, [245](#), [249](#)
- coordinating selected dimensions, [224](#)
- creating
 - calculations, [133](#)
 - personal variables, [73](#)
 - relational database connections, [180](#)
 - relational drill-through, [163](#)
 - SQL queries, [198](#)
 - SQL spreadsheets, [194](#), [204](#), [209](#)
- cubes, defining, [179](#)
- Cumulative calculation, [127](#)
- custom documents
 - Alias Controller object, [238](#)
 - components, adding, [217](#)
- D**
- data formatting, [98](#)
- Data Layout
 - options, [58](#)
 - overview, [56](#)
- data source metadata changes, Rename Utility and, [279](#)
- data source, linking components by, [224](#)
- data values, hiding by, [115](#)
- database connections
 - editing, [184](#)
 - relational, creating, [180](#)
- database preferences, [263](#)
- date selections, [76](#)
- default formatting preferences, [261](#)
- defining relational cubes, [179](#)
- deleting, [190](#)
- design, [213](#)
- Design Documents Interface, [213](#)
- detail, line item, [169](#)
- Difference from Average calculation, [127](#)
- Dimension Browser
 - labels in, [60](#)
 - overview, [59](#)
- dimension headers, sorting, [95](#)
- dimension members
 - selecting with Dimension Browser, [59](#)
- dimensions
 - arranging in the layout, [56](#)
 - browsing, [59](#)
 - coordinating selected, [224](#)
 - moving, [83](#)
 - selecting with Data Layout, [56](#)
 - swapping, [83](#)
- Divide calculation, [128](#)
- Document Reference URLs, [147](#)
- documents
 - changing display types for, [101](#)
 - drilling to detail, [84](#)
 - locking display types for, [101](#)
- dragging, [88](#)
- drill linking
 - accessing the Drill Link Options dialog box, [87](#)
 - defining drill links, [87](#)
 - overview, [86](#)
- drill-through, relational, creation, [163](#)
- drilling
 - overview, [84](#)
 - user preferences, [85](#)
 - variations, [86](#)
- drilling preferences, [261](#)
- dynamic text labels, [200](#), [232](#)

Dynamic Time Series

- definitions, [76](#)
- substitution variables, [76](#)

E

editing

- pinboards, [188](#)
- pins, [190](#)

Enter Member's Display Name dialog box, [231](#)Enter SQL Query dialog box, [197](#)environment variables, [271](#)

exporting

- to the clipboard, [144](#)

F

features

- Financial Management, [168](#)

files, Rename Utility, [280](#)folders preferences, [259](#)font properties, [110](#)

formatting

- cells, [99](#)
- chart properties, [103](#)
- data, [98](#)
- default, preferences, [261](#)
- measures, [162](#)
- methods, order of precedence, [92](#)

Ggeneral user preferences, [258](#)graphics, selecting, [111](#)**H**header labels, fitting in columns, [100](#)

hiding

- by color, [115](#)
- by data value, [115](#)
- by selected members, [115](#)

Home page

- preferences, [258](#)
- specifying, [258](#)

hotspots, [240](#)HTML Browser object, [236](#)**I**Image objects, [236](#)image selection, [111](#)installing JDBC drivers, [177](#)integrated applications, retrieving content from, [245](#), [249](#)intersections, paging through, [83](#)**J**JDBC drivers, installing and configuring, [177](#)**L**

label mode

- custom Alias Controller object, [238](#)
- overview, [94](#)
- setting default, [59](#)

layouts, arranging dimensions in, [56](#)line item detail, [169](#)Linear Regression calculation, [128](#)Linked Reporting Objects. *See* LROs.

linking

- components by data source, [224](#)
- selected dimensions, [225](#)

List Environment Variables page, [271](#)Look and Feel preferences, [260](#)

LROs

- accessing, [253](#)
- overview, [253](#)

Mmap file, for Rename Utility, [281](#)Maximum calculation, [128](#)Maximum Value calculation, [128](#)measures formatting, [162](#)

member selection

- advanced, [61](#)
- defining previous, [77](#)
- for pinboards, [186](#)

members, renaming text labels for, [231](#)Minimum calculation, [129](#)Minimum Value calculation, [129](#)modifying calculations, [137](#)Multi-level Combo Box Subscription object, [238](#)Multiply calculation, [129](#)

N

navigation methods, 82

O

objects

- Check Box, 237
- HTML Browser, 236
- Image, 236
- Multi-level Combo Box Subscription, 238
- Split Panel, 235
- SQL Grid, 241
- SQL Spreadsheet, 241
- SQL Subscription, 241
- Tab Group Subscription, 237
- Text, 235

OLAP query builder. *See* Data Layout.

OLAP server preferences, 262

P

paging through intersections, 83

Percent calculation, 129

Percent Difference from Average calculation, 130

Percent of Difference calculation, 130

Percent of Member calculation, 130

Percent of Total calculation, 130

personal variables, creating, 73

Pinboard Designer, 186

pinboards

- background selection, 186
- editing, 188
- tips for creating, 191

pins, 190

- adding, 189
- deleting, 190
- editing, 190
- options for, 188
- selecting, 189
- tips for creating, 191

points of view

- creating, 75
- definitions, 265
- overview, 74

POV. *See* points of view.

preference files

- creating, 257
- editing shared, 257

managing shared, 257

preferences

- database, 263
- default formatting, 261
- drilling, 261
- folders, 259
- Home page, 258
- Look and Feel, 260
- OLAP server , 262

previewing

- charts, 109
- print jobs, 155

Print dialog box

- Headers/Footers tab, 150
- Page tab, 150

Q

queries

- building OLAP queries with Data Layout, 56
- creating SQL, 198
- defining with Data Layout, 56
- Dynamic Time Series definitions for, 76

R

Rank Ascending calculation, 131

Rank Descending calculation, 131

Redo command, 89

related content, 245, 249, 250

- accessing, 245, 249
- cell text, 169
- definitions, 114
 - accessing, 245, 250
 - applying to cells, 251
 - creating, 252

Related Content dialog box, 246, 250

Related Content dialog box, 245, 250

relational cubes, defining, 179

relational data

- access, 176
- retrieving tables, 179

relational database connections, creating, 180

relational drill-through

- creating, 163
- overview, 162

Rename Utility

- files, 280

- folder structure, 280
- important considerations, 279
- installing, 279, 281
- map file, 281
- metadata changes supported, 279
- objects updated by, 279
- overview, 279
- properties file, 285
- using, 284
- Renamer.properties file, 285
- Restrict Data analysis tool, 122
- Restrict Data definitions, restriction columns, 123
- Restriction Columns dialog box, 123
- Retrieve Only Top/Bottom analysis tool, 124
- retrieving relational tables, 179

S

- SAP BW, advanced member selection, 172
- Select Column Advanced dialog box, 200
- Select Graphic dialog box, 111
- selected members, hiding by, 115
- selecting
 - colors, 110
 - current component, 217
 - dimension members, 59
 - graphics, 111
 - pins, 189
- selecting dimension members, 60
- setting, background color, 220
- shared preference files
 - creating, 257
 - editing, 257
 - enabling, 257
 - selecting, 256
- Show/Hide Only analysis tool
 - creating definitions, 117
 - editing definitions, 115
 - overview, 115
- Show/Hide Only dialog box, 116
- sizing columns, 100
- Sorting analysis tool, 121
- sorting dimension headers, 95
- Split Panel object, 235
- splitter bars, creating, 223
- SQL
 - queries
 - column selection for, 200

- composing, 198
- creating, 198
- defining, 197
 - spreadsheets, creating, 194, 204, 209
- SQL Grid object, 241
- SQL Query Builder wizard, 198
- SQL Spreadsheet objects, 241
- SQL Subscription objects, 241
- startup procedure, 19
- subscription controls, creating, 226
- substitution variables
 - Dynamic Time Series, 76
 - syntax, 73
 - using, 72
- Subtract calculation, 131
- Sum calculation, 131

T

- Tab Group Subscription object, 237
- text labels
 - dynamic, 200, 232
 - members, renaming, 231
 - renaming member text labels, 231
- Text objects, 235
- time selections, 76
- traffic lighting
 - analysis tool overview, 118
 - opacity, 120
 - Traffic Lighting dialog box, 118
 - transparency, 120
- Trend calculation, 132

U

- Undo command, 89
- unlinking coordinated components, 224

V

- Variance calculation, 132
- Variance Percent calculation, 132

A B C D E F G H I J L M N O P Q R S T U V